

DARPAN



V.V.P
ENGINEERING COLLEGE
AICTE approved & affiliated to
GTU
Ahmedabad

BIOTECHNOLOGY
ENGINEERING
DEPARTMENT

January To June-2024

MESSAGE FROM TRUSTEES



India's energy transition is in its initial stages because, otherwise economic growth would not be sustainable and human security would be at stake, since millions of climate refugees are created due to the devastating consequences of climate change.

The Prime Minister has committed to increase renewable energy and reach 500GW target by 2030, which is only 100GW in 2021.

Our wind energy production is only 12.5% of the total potential and solar energy production is only 4.6 % of the total potential, a challenging task to tap unused resources.

The Prime Minister has announced the launch of the National Hydrogen Energy mission.

Green Hydrogen is a major component of renewable capacity of energy.

Engineering problems of cost, scale, adopting new technologies; working out distribution chains and storage of Hydrogen should be met by the government, bureaucracy, universities, engineers and technocrats by a coordinated policy and its implementation.

MESSAGE FROM PRINCIPAL



Dr. Tejas Patalia
Principal

Welcome to V.V.P .Engineering College, a world class centre for excellence in technical education. We are a leading technological institute of India, a home to a wide range of academic departments, providing best education in the major areas of technology and services in the area of our research and consultancy.

We are proud and distinct through our global technical perspective, cosmopolitan character and being deeply rooted in the high Indian traditional culture, heritage and values.

You would enjoy the challenges and opportunities we offer. We look forwards to welcoming the engineering aspirants to a place of genuine intellectual excellence for an unforgettable simulating experience in the world of existing and emerging technologies, Welcome back to Future....

ABOUT V V P ENGINEERING COLLEGE

Vyavasayi Vidya Pratishtan is established by Rajkot NagarikSahakari Bank Ltd. to promote quality education in various technical fields. The trust was founded in 1996 with the objective of meeting technical educational needs of Gujarat

The trust prides itself of establishing the first engineering college in Rajkot, the central location of Saurashtra and Kutch region.

V.V.P. Engineering College is a self-financed institution affiliated to Saurashtra University and Gujarat Technological University, recognized by All India Council for Technical Education (AICTE), New Delhi and the Government of Gujarat.

It has a specially designed on 30 acres of land with spacious building providing an adequate infra-structural facility setup in a beautiful natural surroundings. It is landscaped with enlivened architecture that creates conducive environment of learning. The campus is located 10 Km on Kalawad Road, the west of Rajkot, with transportation and conveyance facilities.

VVP Engineering College is one of the best engineering colleges in India catering holistic growth to the students. It is providing state of the art facilities to the students. The institute has many schemes and offers for well education of the students.

VISION

To be an exemplary institute transforming students into competent professionals with human values.

MISSION

To provide a conducive academic environment for strengthening technical capabilities of the students.

To strengthen linkages with industries, alumni and professional bodies.

To organise various co-curricular and extra-curricular activities for overall development of the students.

To practice good governance and conduct value-based activities for making students responsible citizens.

MESSAGE FROM HEAD OF DEPARTMENT



Prof. Pooja Chavda
Head of Department

Welcome to the Department of Biotechnology at V.V.P. Engineering College, Rajkot.

The mission of the department is to create and apply new knowledge in Biotechnology to meet current national and global needs and to prepare undergraduate (B.E.) students for successful careers. Our diverse research portfolio address the current challenges in area of biotechnology with focus on energy and the environment apart from academic projects in medical, health care, dairy and food industries. These problems demand a multi-disciplinary approach and our department has expertise in are as spanning Biotechnology and Chemical Process engineering, Bio Informatics, Molecular Biology and Tissue Culture.

ABOUT BIOTECHNOLOGY DEPARTMENT

Biotechnology engineering is the study, research, development and application of living organisms to manufacture various bio products. The Biotechnology engineering course incorporates the combination of subjects like math's, chemistry, genetics, bio-chemistry, molecular biology, process design etc. the Biotechnology contributes to the upliftment of the fields like agriculture, pharmaceutical (disease research and drug design), Environment (eco-conservation), production of fertilizers, vaccines manufacturing, energy production as well as the areas like animal husbandry, food technology etc.

The department is set with state-of-the-art equipments in laboratories for microbiology and immunology, biochemistry, molecular biology, plant cell culture (Tissue culture), bioinformatics, bioprocess technology and downstream processing. Separate chemical room and computer lab is also available. The department has research facilities housing advanced equipment like PCR, UV-VIS Spectrophotometer, refrigerated centrifuges, high speed centrifuge and basic equipment like electrophoresis systems, microscopes etc. to cater the needs of students.

V.V.P. Engineering College strives to gift the best of the biotechnology engineers of the future to the society, in real sense!

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INDUSTRIAL VISIT (I)



Industrial visit at Balaji Wafers

Industrial visit of Sem 4 biotechnology engineering students was organised on 16/03/24 at Balaji Wafers, Kalawad Road Near IOCL petrol pump Vajdi, Ta, Lodhika, Gujarat 360021 "The Company has 55+ product range and 120+ SKUs. They have strong presence in the remotest of the areas to sprawling cities is made possible through ever-expanding powerful distribution network consisting of 1,000+ dealers. Balaji aims to provide a quality snacking experience at the most affordable price to people across all age groups." Students learned the process, production , packaging etc from the visit.

INDUSTRIAL VISIT (II)



Industrial visit at Giriraj Dairy

Industrial visit of Sem 4 Biotechnology Engineering students was organised on 04/04/24 at Giriraj Dairy, Plot No G-2702 Kalavad Road kranti gate Metoda GIDC Lodhika, Gujarat 360021. The Giriraj Dairy collects the milk from the near by villages and process it's for pasteurization and further separate it based on the fat content. The separated milk is used for production of different milk product .They store milk at storage area. Their best selling milk products, such as cooking butter, milk, curd, buttermilk, paneer, shreekhand and condensed milk. Students learned the process, working, production etc at Giriraj Dairy.

INDUSTRIAL VISIT (III)



Industrial visit at SNJ Lab

On February 21, 2024, the Department of Biotechnology at VVP Engineering College organized an industrial visit to SNJ Labs Pvt. Ltd., located in Padavala Village, Shapar, Rajkot. The visit commenced with a warm welcome from the SNJ Labs team and an enlightening introduction to the company through a concise video presentation. This was followed by a comprehensive overview of the company's historical journey, its significant role in the pharmaceutical sector, and the strategic evolution of its manufacturing capabilities, as provided by the company's HR. SNJ Labs is a prominent producer of Iron Sucrose in India, spanning an impressive 1500 square meters, with three production plants and a dedicated Effluent Treatment Plant. The total annual production across all product lines amounts to around 1800 MT, with a global presence in 21 countries.

The visit included an immersive tour of the production units, segmented into Intermediate and Powder areas. The journey of the finished product, from centrifugation and drying to packaging and subsequent storage in the warehouse, was elaborated upon. Key departments such as Research and Development (R&D), Quality Control (QC), and Quality Assurance (QA) were showcased, featuring advanced instruments like Auto Titrator, FTIR, HPLC, and GC. The emphasis on water treatment, facilitated by a robust system comprising Reverse Osmosis (RO) and Ultraviolet (UV) filtration, underscored SNJ Labs' commitment to maintaining a contamination-free production environment. Additionally, the visit covered key areas such as the Effluent Treatment Plant, Chilling Plant, and ongoing construction sites earmarked for future expansion. The visit provided valuable insights into the industrial processes and quality assurance practices, making it a highly informative and enriching experience for all participants.

The industrial visit should have greatly benefited the students by providing them with a practical understanding of complex manufacturing processes and quality control measures, bridging the gap between theoretical knowledge and real-world applications. This hands-on experience is invaluable for their academic and future professional endeavors.

DEPARTMENT ACHIEVEMENT



MOU with Petox Food Pvt.Ltd

In order to develop academic and scientific relationships, and in support of collaborative research activities, Biotechnology Engineering Department, V.V.P. Engg. College, Rajkot, GTU, and Petox Food, Rajkot have agreed to execute Memorandum of Understanding (MOU) as a framework for cooperative progra

Collaborative activities would include Exchange of expertise, Collaborative research and overcoming various challenges faced as a start up

The MOU was signed by representative of Biotechnology Department, Incharge Head Ms. Pooja Chavda, and Mr. Hitesh Patel founder of Petox Foods Rajkot.

ALUMNI INTERACTION:(I)



Alumni Interaction with Alafiya Trivedi

Introduction

On 15 April 2024, our Department organized an online alumni interaction session featuring Alafiya Trivedi, a distinguished alumna currently pursuing her higher studies in Germany. The session was attended by 4th semester Biotechnology students eager to learn from Alafiya's experiences and gain insights into studying and living abroad.

Alafiya began by sharing her overall experience in Germany, highlighting both the academic and cultural aspects. She described Germany as a country rich in history and innovation, offering a conducive environment for academic pursuits and personal growth. She emphasized the high standards of education, research opportunities, and the multicultural environment that fosters a global perspective.

Preparation for Going to a German University

Alafiya elaborated on her preparation journey for studying in Germany. She started by researching various universities and courses, focusing on those that aligned with her academic interests and career goals. She highlighted the importance of understanding the application requirements, which often include a strong academic record, letters of recommendation, a well-crafted statement of purpose, and proficiency in the German or English language, depending on the course.

Struggles Faced in Preparation in India

Alafiya candidly discussed the challenges she faced during her preparation phase in India. One of the significant struggles was managing time effectively while balancing her undergraduate studies, test preparations, and the application process. She encountered difficulties in gathering accurate information about different universities and their specific requirements, which often led to confusion and delays.

Struggles Faced While Living in Germany

Alafiya discussed the initial culture change and the difficulties of adapting to a new environment. Language barriers, despite her prior preparation, were an obstacle in daily interactions and academic settings. She highlighted the importance of perseverance and continuous learning to overcome these barriers.

The session with Alafiya Trivedi was incredibly enlightening and inspiring. Her journey underscored the importance of thorough preparation, resilience, and adaptability when pursuing higher studies abroad. Alafiya's experiences provided valuable insights and practical advice for students aspiring to study in Germany or any foreign country. The interaction concluded with a Q&A session, where Alafiya addressed students' queries, leaving them motivated and better informed about their future academic endeavors.

ALUMNI INTERACTION:(II)



Alumni Interaction with Jevil Patel

Mr. Jevil Patel , Alumni of 2017 pass out batch came on 26th April 2024 to share his knowledge and experience of past 5 years with current students. He is the director at Celaxis Biosciences Company. Celaxis Biosciences is a fermentation based API manufacturing company that produces different antibiotics. He discussed about the fermentation industry and what are the challenges faced during erection of plant and how they developed their products. Students asked him various questions about the development of products and manufacturing in industry and some crucial things to take care of are. He also talked about the significance for designing the product and its importance.

EXPERT LECTURE:(I)



Expert Lecture by Miss.Foram Chandarana

On 21st February, an enlightening expert lecture and hands-on session on lateral thinking was conducted by Foram Chandarana. Foram, a former computer engineering student at Atmiya University, played a pivotal role in establishing the maker lab facility there. Her career journey includes working with influential businessmen in Rajkot through the Rajkot Management Association, collaborating with architects to found Detangled Design, and subsequently founding 9r.club and Ethikal Club to focus on sustainability solutions.

Foram's presentation covered various aspects of lateral thinking, engaging students with brain exercises and fun activities that challenged their cognitive functions and thinking behaviors. She taught students methods to enhance the neuroplasticity of their brains and introduced concepts such as divergent thinking, the anagram test, and the functional description test. Among the activities, she included merging 3D random objects with 2D paper drawings and designing chain reactions, making the session highly interactive and enjoyable

The session was not only intellectually stimulating but also incorporated fun learning activities that captivated the students. Additionally, Forum addressed significant issues related to sustainability and waste disposal, encouraging students to apply design thinking to devise solutions. She detailed problems related to environmental pollution and motivated the students to think critically and innovatively about potential solutions. Overall, it was a highly engaging and informative session that provided students with valuable insights into lateral thinking and sustainability

EXPERT LECTURE:(II)



Expert Lecture by Mr. Aditya Sarin

Department of Biotechnology had arranged an expert talk by Mr. Aditya Sarin, Project Assistant, E yuva center, Atmiya University, Rajkot to sensitize and create awareness amongst sem 4 students regarding Startups and E YUVA fellowship.

E-YUVA scheme is mandated to promote a culture of applied research and need-oriented (societal or industry) entrepreneurial innovation among young students and researchers. The scheme provides funding support (through fellowship and research grant), technical and business mentoring, exposure to bio incubation model, orientation to entrepreneurial culture etc. to students at various levels including undergraduates, post-graduates and post-doctoral.

This BIRAC's scheme is implemented through dedicated hubs called E-YUVA Centers (EYCs) housed within the University/Institute set up and mentored by a BIRAC BioNEST supported bio-incubator. EYCs act as anchors and extend requisite support and mentoring to students. Each EYC has a BIRAC supported pre-incubation space which offers infrastructure and equipment for basic research and experimentation by selected students. Advanced research needs are fulfilled through bio-incubator connect.

Students were motivated to come forward with innovative ideas having potential of startups.

CAREER ADVANCEMENT ACTIVITY



Career Advancement lecture by Mr. Ajesh Kamania

An awareness lecture on Overseas Education was conducted for sem 4 students of Biotechnology Engineering Department by Mr. Ajesh Kamania Mentor and Guide at K7 International, an institute having wide experience in global education.

The lecture covered all about different exams like IELTS, GRE, GMAT, SAT and many more, also focused about strengths of global education in different countries like USA, CANADA, Australia. They also talked about top universities in this countries and scope of scholarships at different places.

The students aspiring for higher education in foreign countries got very much benefitted through this lecture.

STUDENTS PARTICIPATIONS

Cultural and club activities
Participants Farewell "Zeal-2024"

Sr.No.	Students Name	Enrollment. No.	Semester	Activity
1	Aditi Soni	220470104018	SEM 4	Theater club
2	Lukhel Urmil	220470104020	SEM 4	Theater club
3	Doshi Palak	220470104004	SEM 4	Dance club
4	Aayushi Dhorda	220470104003	SEM 4	Dance club
5	Kritika Gaglani	220470104005	SEM 4	Dance club
6	Vishwa Modi	220470104015	SEM 4	Theater club
7	Abhijeet Sharma	230470104008	SEM 2	Literature club
				Fine art club

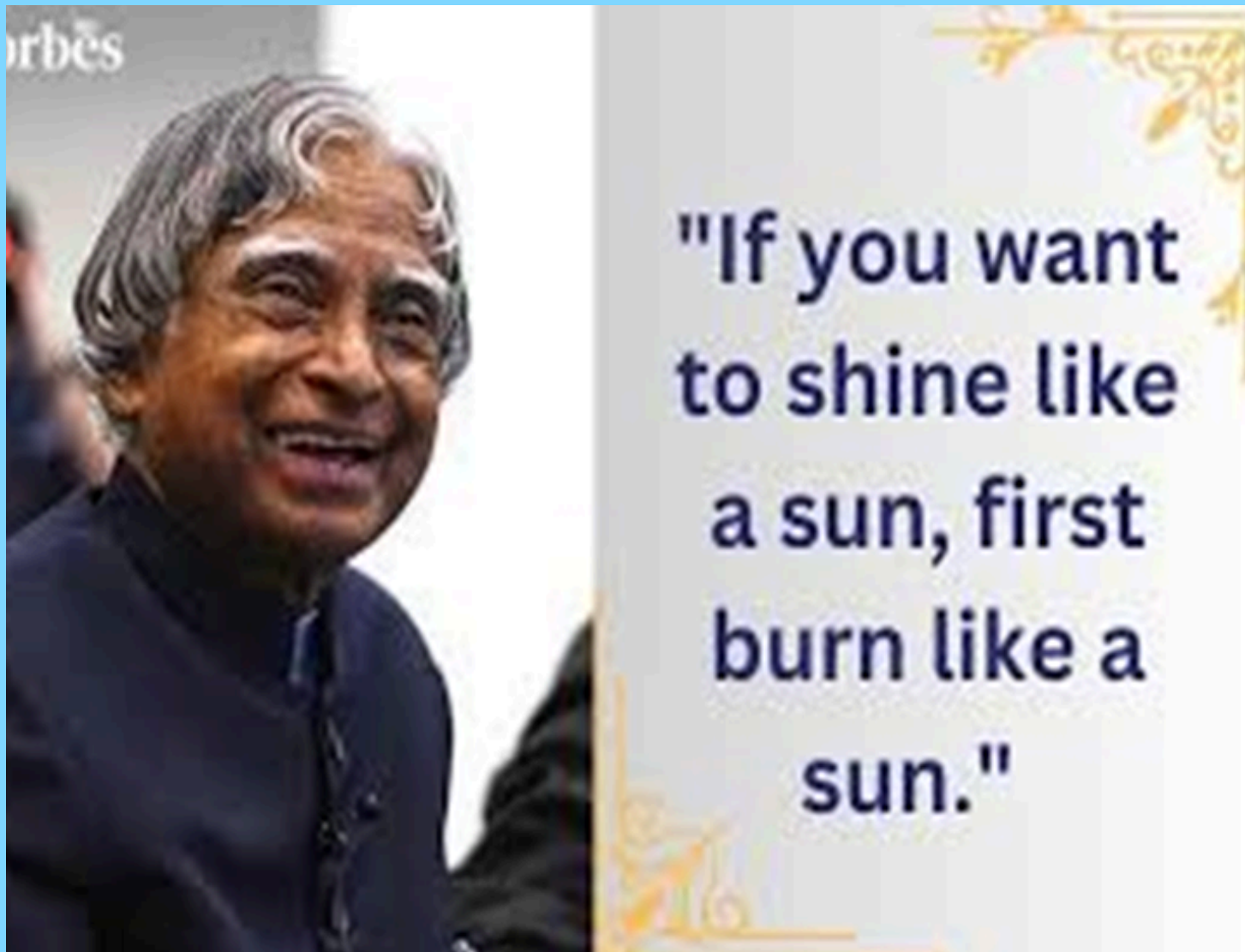
**Participants National Hands on Workshop on
“BIOTECHNOLOGY & IT’S APPLICATIONS”
Organised by Department of Bioinformatics
at Marwadi University
Date: 24/25 April, 2024**

Sr.No.	Students Name	Enrollment. No.	Semester
1	Choudhary Mansi	220470104014	SEM 4
2	Doshi Palak	220470104004	SEM 4
3	Jadeja Krishnaba	220470104009	SEM 4

Participants
International Conference
Med Biotech-2024
Gujarat Biotechnology University (GBU) Gandhinagar
Date: 14 to 16 March-2024

Sr.No.	Students Name	Enrollment. No.	Semester
1	Bhinde Jay	220470104002	SEM 4
2	Gohil Vasu	220470104006	SEM 4
3	Modi Vishwa	220470104015	SEM 4
4	Jhala Neel	220470104011	SEM 4
5	Jhala Neet	220470104012	SEM 4

Positive Quote



STUDENTS' PLEDGE

વી.વી.પી. એન્જનીયરીંગ કોલેજના વિદ્યાર્થીઓ માટેની પ્રતિજ્ઞા



राष्ट्राय स्वाहा इदं न मम ।



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