

Contact

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FACULTY

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Dr. Maneesh Kumar P.

Dr. M. B. Saidutta
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Dr. Hari Prasad Dasari
Dr. I. Regupathi
Dr. Prasanna B. D.
Dr. S. Jitendra Pal
Dr. P E Jagadeeshbabu (H.O.D.)

Dr. Raj Mohan B.
Dr. Vaishakh Nair
Dr. Vidya Shetty K.

LABORATORIES & CLASS ROOM



OUR ALUMNI AT



OUR STRENGTHS

- Well experienced faculty
- World class infrastructure
- Cutting-edge laboratories
- Research Labs with latest equipment
- Air-conditioned modern computer labs with licensed software's
- Well balanced curriculum with theory and practical components
- Strong industry-institutional collaboration
- Faculty interaction with renowned Professors from foreign universities



NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA
SURATHKAL, MANGALORE, KARNATAKA, INDIA - 575025



M.TECH. IN INDUSTRIAL BIOTECHNOLOGY
DEPARTMENT OF CHEMICAL ENGINEERING



Professor Satish Dhawan Young
Engineer State Award
Dr. Raj Mohan B.



Taro technology transferred to
nGV Natural Industry Pvt. Ltd. by
Dr. Prasanna B. D



Professor Satish Dhawan Young
Engineer State Award
Dr. Vidya Shetty K.

ABOUT THE DEPARTMENT

Department of Chemical Engineering was started in the year 1965. It is one of the leading chemical engineering departments in the country and is known for its well-balanced curriculum having both theory and practical, good infrastructure and well qualified faculty. In order to keep pace with the changing needs, a lot of infrastructure in terms of additional space and modern instruments have been established utilizing funds available from MHRD, GOI, TEQIP, TIFAC-CORE, DST, DBT, CSIR, MOEF, FIST etc.

The Department offers an Under Graduate program in Chemical Engineering and three Post Graduate programs with specialization in Chemical Engineering, Environmental Science and Technology and Industrial Biotechnology. In addition M.Tech (Research) and Doctoral programmes are also offered. The Department also offers product testing and industrial consultancy services.

VISION OF THE DEPARTMENT

The vision of the department of Chemical Engineering at NITK is to be a leading chemical engineering department in the county and be known worldwide for its quality education and research and to produce graduates who contribute to the needs of industry, the scientific community and society

MISSION OF THE DEPARTMENT

MS1: To provide students with quality engineering education, so as to enable them to benefit the society through their service and expertise to the profession of chemical engineering and related fields in industry, business, research and academia.

MS2: To expand the base of engineering knowledge and to serve the needs of society through basic and applied research.

M. Tech.

- Established: 2007

- Sanctioned intake: 33

PROGRAMME OBJECTIVES

1. Advance professionally in the practice of biotechnology, biochemical engineering or allied fields.
2. Advance professionally in their chosen career path, wherein they apply the communicative, logical, analytical, computational or problem solving skills developed during their graduate study to their professional practice fulfilling the ethical and social responsibilities.
3. Successfully collaborate and work in multidisciplinary teams to tackle complex multifaceted problems.
4. Pursue advanced studies and research in biochemical or biotechnology and management.
5. Assume leadership roles in industry or business in the context of societal needs.

Programme Core (PC)

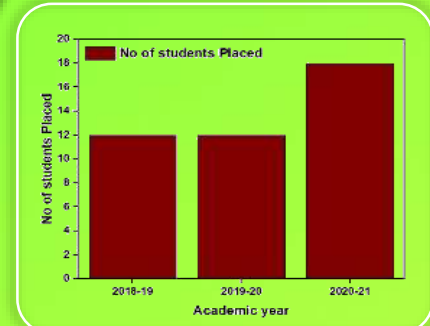
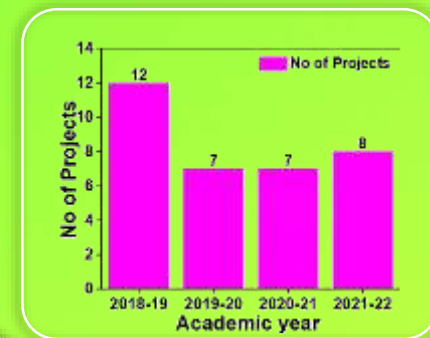
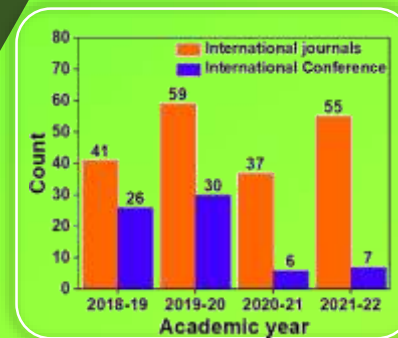
- Transport Phenomena
- Bioprocess engineering
- Environmental biotechnology
- Downstream Process Technology
- Bioreactor Engineering
- Bioprocess lab

Elective Courses (Ele)

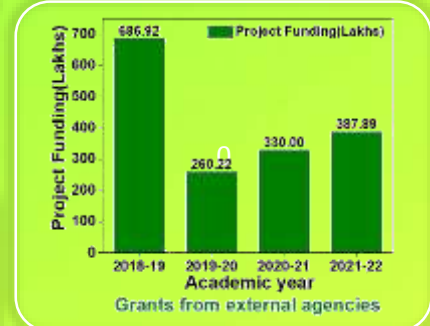
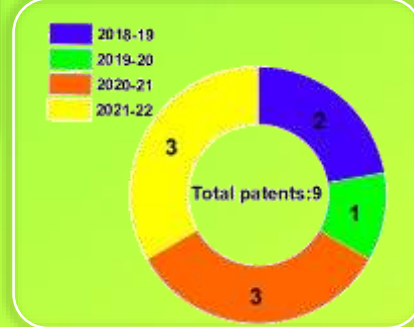
- Bioanalytical techniques
- Enzyme Technology
- Genetic Engineering
- Bioremediation Techniques
- Biosensors (CH865)
- Cell Signaling and Systems Biology
- Quality control in Biopharmaceutical industries
- Animal Cell Biosystems and Immunotechnology
- Protein Engineering
- Industrial and Environmental Epidemiology

Computational & Design Software

MATLAB, ASPEN, ANSYS, AERMOD VIEW, CHARMS, CHEMCAD, PHAST MICRO, PYTHON, UNISIM.



DEPARTMENT STATISTICS



FACILITIES

- Atomic Absorption Spectrophotometer
- Fast Protein Liquid Chromatography
- Liquid Chromatography – Mass Spectrophotometer
- High Performance Liquid Chromatography
- Particle Size and Zeta Potential Analyser
- High Speed Refrigerated Centrifuges
- Nanodrop Spectrophotometer
- Ion Chromatography
- UV Spectrophotometer
- Inductively Coupled Plasma Optical Emission Spectrophotometer
- Karl Fischer Titrator
- Cell Culture Facility
- Deep Freezer
- Electro Spinning Machine
- Fermentors (2L, 3L, 14L)
- Gas Chromatography
- Gel Documentation system
- Lyophilizer
- Real Time PCR

Conventional & Specialized Laboratories

- Bioresource and Bioproduct Engineering
- Fermentation Laboratory
- Environmental Biotechnology & Nanotechnology Laboratory
- Downstream Processing Laboratory
- Biochemical Engineering Laboratory

CONSULTANCY ACTIVITIES

- Department provides consultancy to MRPL, MCF, Hindustan Lever, and many more in areas of
- Modeling and Simulation
 - Process Energy Intensification
 - Catalyst Development
 - Design and Development of Novel Contactors
 - Technical Evaluation of Third Party Design
 - Design of Process Vessel

CURRENT RESEARCH AREAS

- Aqueous Two Phase Extraction
- Bioprocess Development and Optimization
- CFD Modeling of Micro & Macro Systems
- Nano Materials for Photocatalysis and Hybrid Membrane
- Design and Development of Reactors or Specific industry / Environmental application
- Drug Delivery System (Nano-Soft/Hard Carriers, Bio-Conjugation)
- Polymer Science & Polymer nanocomposite
- Process Control and Machine Learning
- Material development for SOFC & SOEC.
- Design & Simulation of Process Equipment
- Nanophotocatalysis