About the Department
- Established in 2002.
- B.E. in Biotechnology Engineering programme is accredited by NBA, New Delhi for 5 years (2012 to 2017).
- Recognized as Center of Innovative Science & Engineering Education (CISEE) by VGST, Bengaluru.
- Total research grant received Rs. 1.5 Crores.
- Research publications from UG students project work.
- Grant received from KSCST, VGST, K-BITS till date for Final year UG students projects: Rs. 13.54 Lakhs.
- 4 patents filed based on research inventions.
- Well equipped research labs.
- Dedicated and qualified faculty.

Ongoing Research
- Biofuels; Plant tissue culture; Biofertilizer; Biosynthesis of nanoparticles and its applications; Bioremediation.

List of Equipments
- Incubator shakers, Spectrophotometer, ELISA Reader, PCR, Gel documentation system, HPLC, Atomic absorption spectrometer, Gas chromatography, Fermenter, Plant tissue culture facility with green house, Refrigerated centrifuges, Camera attached binocular microscope, Deep freezer, Lyophilizer, Autoanalyzer, 50 lit capacity biodiesel production unit.

M.Tech. in Industrial Biotechnology under VTU, Belagavi

Core subjects offered
- Numerical Methods & Biostatistics: Techniques to evaluate biological and bioprocess data.
- Fermentation Technology I: Cell culture methods, sterilization, strain improvement, design and develop medium for inoculum development, control system for control of industrial fermentation process.
- Advanced Molecular Biology: Work with nucleic acid processing, rDNA technology and therapeutics.
- Bioprocess Engineering: Concepts of fluid flow, mixing & filtration and measurement & control strategies for these operations in industrial scale.
- Food Process Engineering: Various aspects of food processing such as drying, food conversion methods, cooling, preservation, analyze & investigate properties of food, quality of food and design various food processing operations through experiments.
- Fermentation Technology II: Downstream operations in a fermentation industry to obtain a purified marketable product.
- Quality, Safety and Project Management: GMP, GLP field studies. Project management concepts and its application to process industry.
- Bioreactor Design and Analysis: Design of bioreactor based on thumb rules. Apply the computational analysis methods for evaluating dynamics of bioreactor. Operation of different types of bioreactors used in fermentation and bioprocess industry.
- Research Methodology: Fundamental concepts of doing research, writing research articles, application of statistical techniques to research output to evaluate & analyze research data. Application of softwares in the interpretation of results and data presentation. Importance of intellectual property and methods to safeguard.

Electives
- Instrumental Methods of Analysis: Advanced Immunoanalytical tools
- Bioreaction Engineering
- Petroleum Biotechnology: Biofuels Engineering
- Industrial Waste Treatment: Biopharmaceuticals
- Bioprocess Modeling & Automation

Opportunities
- Internships in industry for meritorious students.
- Incubation centre funded by KBIITS, GoK for entrepreneurial startup.
- Institute has signed MoU with NUS Singapore, Ritsumeikan University Japan, Penn State University Harrisburg USA for student & faculty exchange program.
- Publish papers in conferences & peer reviewed journals.

Eligibility
- B.E./B.Tech. : Biotechnology, Biochemical Engineering, Biomedical Engineering, Chemical Engineering, Food Technology.
- PGCET qualified (conducted by KEA, Bengaluru) or GATE qualified (http://www.kea.kar.nic.in/).
- PGCET qualifying is mandatory for management seats.

Contact Details:
Dr. C. Vaman Rao
Professor & Head of the Department,
Department of Biotechnology Engineering
NMAM Institute of Technology
Nitte – 574110
Karkala Taluk, Karnataka
Tel.: +91 – 8258 – 281263 / 281264 / 281248 Extn:280
Email: vamanrao@nitte.edu.in, vaman.rao@gmail.com
Website: http://nmaminit.nitte.edu.in

Note: GATE qualified candidates will be provided with stipend as per AICTE norms.