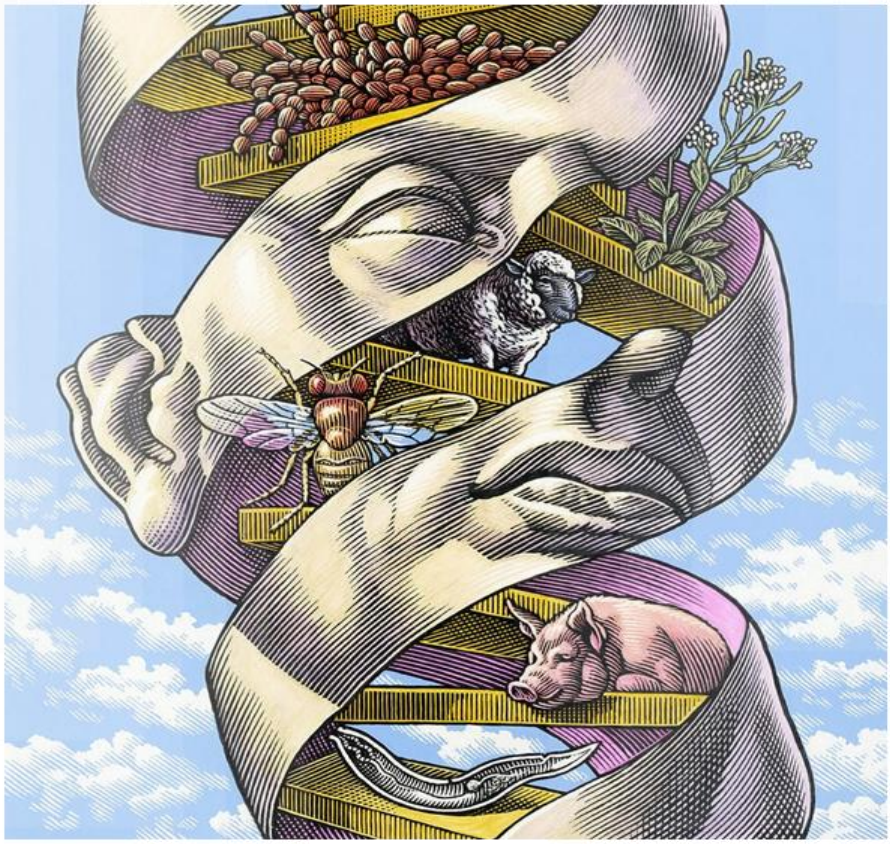
DEPARTMENT OF BIOTECHNOLOGY



Contact Details

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BMS COLLEGE OF ENGINEERING
(Autonomous Institute under VTU)

DEPARTMENT OF BIOTECHNOLOGY

Established in 2002, the Department of Biotechnology, B.M.S. College of Engineering, aims to impart quality education with distinctive proficiency of merging engineering principles with biological systems. The Department offers Undergraduate program with an intake of 60.

DEPARTMENT VISION

To be a Centre of excellence in the field of Biotechnology equipped to create graduates who endeavor for the welfare of mankind.

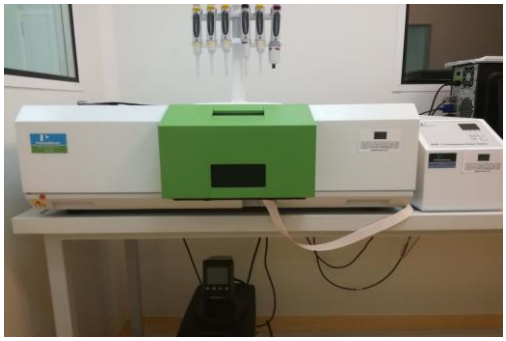
DEPARTMENT MISSION

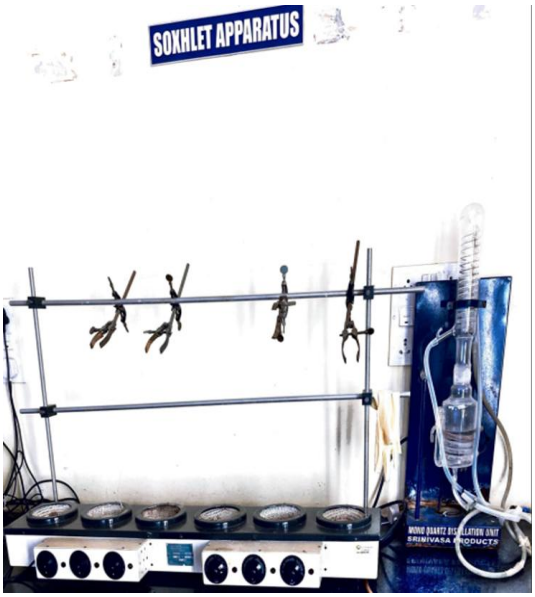
1. To impart quality education for life long professional growth and opportunity in a wide range of careers.
2. To create awareness towards socio-ethical implications of potentials of Biotechnology.

Program	Year of Start	Present intake
BE Biotechnology	2002	60

LIST OF EQUIPMENT FACILITIES AVAILABLE IN DEPARTMENT EXTERNAL SAMPLE ANALYSIS

Faculty Incharge	**Equipment Specification**	**Equipment**
Dr. Divijendra Natha reddy S divijendranathr.bt@bmsce.ac.in	Real Time PCR QUANT STUDIO3, Applied biosystems/Thermo fisher **Services/Applications** : 1. **RT-PCR diagnostics/tests** **2. Analyses of gene expression**	

Dr. Chandraprasad MS chandraprasadms@gmail.com	HPLC (Semi prep and Analytical) **LC 20-AP, SCHIMADZU** PDA and RID detectors Reverse, Normal phase, Sugar and Ionic columns available. **Services/Applications** 1. Solutes separation 2. Qualitative/Quantitative analysis of various solutes 3. Peak analysis & interpretation 4. Solutes purification	
Lt. Ashok Kumar S ashok.bt@bmsce.ac.in	**BioLogic DuoFlow™ FPLC System (Bio-Rad)** UV Detector with fixed 254 nm and 280 nm filters. Supported with Fraction Collector. **Services/Applications:** High resolution purification of Protein, peptides and other biomolecules with the retention of the biological activity	
Lt. Ashok Kumar S ashok.bt@bmsce.ac.in	**LS-55 Fluorescence Spectrometer (PerkinElmer) with Peltier Temperature Controller** Light source: Pulsed Xenon Lamp Software: FL WinLab **Services/Applications:** 1. Fluorescence 2. Phosphorescence 3. Bioluminescence 4. Chemiluminescence 5. 3D excitation/emission, synchronous, and kinetic scanning 6. Excitation, emission, constant wavelength synchronous and constant energy synchronous spectral scanning 7. Single- and multiple-wavelength kinetics 8. Simple quantitation by curve fitting with several fit algorithms 9. Intracellular ion analysis 10. Polarization	

Dr.Rashmi S Shenoy rashmis.bt@bmsce.ac.in	**Scanvac Cool Safe 55-4 Basic 4lt freeze dryer** **Applications:** 1. Freeze dryers / Lyophilizers are especially designed for bio-products sensitive to antibiotic, vaccines, blood products, enzymes and hormones. 2. Freeze drying systems are perfect for both routine and specialized freezing experiments of little amount of products in laboratories.	
Prof Pradeep S. pradeeps.bt@bmsce.ac.in	**In-Silico facility for data analysis** (Licensed MATLAB software available)	
Dr. Saisha Vinjamuri saishav.bt@bmsce.ac.in	**Bio lite Fermentor/bioreactor (Sartorius)** Bench top Classical stirred-tank design Capacity : 2lt . Automated control for pH and temperature. **Applications :** Process development, optimization and characterization - Scale-up and scale-down studies Seed expansion and small scale production	
Dr Praphulla praphullarao.bt@bmsce.ac.in	**CLASSIC SOXHLET APPARATUS** Dimensions (W x D x H) 900 x 225 x 650 mm Heating mantles-Raaga Industries Apparatus for classic, manual extraction using the Soxhlet method. Serial heating unit with 6 individually adjustable heaters. **Applications:** Extraction of lipids and other molecules from a solid sample. Extracting valuable bioactive compounds from various natural sources.	

Dr Praphulla praphullarao.bt@bmsce.ac.in	**Normal Borosilicate Glass Rotary Evaporator** Integrated vacuum controller with central display for automatic distilling CR-2000 Model, Cyberlab cooperation **Applications:** Rotary evaporators are also used for concentration, crystallization, drying, separation, and solvent recovery in addition to the continuous distillation of volatile solvents and are utilized in various fields and applications, including pharmaceutical, chemical, and biotechnology industries.	
Dr Savithri Bhat savithri.bt@bmsce.ac.in	**Applied Biosystems™,Veriti™ 96-Well Fast Thermal Cycler-PCR** 1. Innovative VeriFlex™ Blocks allow for precise PCR optimization or to run up to 6 independent assays. 2. Six Temperature Zones for convenient PCR optimization 3. Standard and fast enabled cycling to address your current and future PCR needs 4. Easy-to-use graphical interface (6.5 inch VGA Touch Screen) 5. Convenient protocol transfer from one Veriti™ Thermal Cycler to another using USB 6. Reduced PCR cycling time when using faster ramp rates 7. Optional VeritiLink™ Remote Management Software provides you with peace of mind, allowing you to remotely manage more than 50 cyclers from your PC or internet-compatible phone	
Dr Savithri Bhat savithri.bt@bmsce.ac.in	**Eppendorf Mastercycler Nexus Gradient Thermal Cycler** Eppendorf Mastercycler Nexus Gradient Thermal Cycler. 1-20°C temperature control range. Gradient temperature range of 30-99°C. Features an aluminum thermal block. 96x 0.2 mL PCR tubes or 77x 0.5 mL PCR tubes or 1x 96 well PCR plate capacity 4-99°C temperature control range.	
Prof Prathibha	**GENESYS UV-Visible Spectrophotometer**	

prathibhan.bt@bmsce.ac.in	**Baseline Flatness**:±0.002 A **Compartments**: Accommodates (optional): 8-position cell changer 4-position cell changer (long path cells) Peltier thermostatted cell holder (20-60 °C) Sipper accessory Fiber optic probe coupler Connections:Single USB-A Duplex USB-A Export data to network or PC via USB, Ethernet, or Wi-Fi USB adaptor, available Print via USB, Ethernet or Wi-Fi USB adaptor available **Detector Type:** Dual Silicon Photodiodes **Display:**7 in. High Definition Color Touchscreen, Tiltable, 800 x 1280 pixels **Dimensions (L x W x H)** 35.5 x 38.5 x 19.5 cm **Light Source:** Tungsten Halogen **Spectral Bandwidth:** 2 nm **Wavelength Range:** 190 to 1100 nm **Services/Applications:** Detection of specific components in sample within the specified wavelength range	