About the Department

The department of Biotechnology, Basaveshwar Engineering College, Bagalkot, established in 2002 with a vision to make an impact through effective teaching learning process, basic research, technology based training and service to the society.

Currently department has 07 faculty members with 03 Ph. D and 04 PG (Registered for Ph.D) degree. Well equipped laboratories helped the students to develop the skills and to understand the concepts clearly. Karnataka State Bioenergy Development Board (KSBDB), Government of Karnataka recognized Biotechnology department as Bioenergy Research, Information & Demonstration Center to study and carry out the basic and process research in the area of biofuels technology. The focus of the department includes applied and basic research in food processing, biofuels technology, plant tissue culture, fermentation technology, molecular biology and bioinformatics. Regular interaction with faculty from IITs, personnel from industry helped in enhancement and up gradation of the students' knowledge in the areas of Biotechnology. Regular visits and industrial internship to biotech, food and pharma industries helped students to keep themselves updated with technological changes.

INSTITUTE VISION

To be recognized as a premier technical institute committed to developing exemplary professionals, offering research based innovative solutions and inspiring inventions for holistic socio economic development

INSTITUTE MISSION

- To pursue excellence through student centric dynamic teaching-learning processes, encouraging freedom of inquiry and openness to change
- To carry out innovative cutting edge research and transfer technology for industrial and societal needs
- To imbibe moral and ethical values and develop compassionate, humane professionals

DEPARTMENT VISION

To be an internationally reputed center of education and research in the field of Biotechnology

DEPARTMENT MISSION

- To produce technically sound and ethically oriented students by imparting quality education through improved teaching-learning process
- To take up activities in the area of applied research to meet the needs of the community and industry in the field of Biotechnology

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

1. To provide basic foundation in mathematical, science and engineering fundamentals to comprehend analyze, design and create novel products.
2. To prepare students to pursue higher education and excel in technical profession.
3. To imbibe students with professional, ethical and human values.
4. To develop biotechnology engineers conversant with global safety standards.
5. To build team work, effective communication skills, multidisciplinary approach and an ability to relate engineering to broader societal context.

PROGRAM OUTCOMES (POs)

Engineering Graduates will be able to:

1. **Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

2. **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.

3. **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.

4. **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.

5. **Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

6. **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.

7. **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.

8. **Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9. **Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

10. **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.

11. **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.

12. **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.

PROGRAM SPECIFIC OUTCOMES (PSOs)

1. Acquire competency in applications of engineering principles to biological systems
2. Acquire knowledge in domains of Biotechnology, enabling their applications in industry and research
3. Recognize the importance of bioethics, entrepreneurship and environment to empower the students to acquire technical skills by connecting disciplinary and interdisciplinary aspects of biotechnology.