

## VISION & MISSION

Biotechnology and Microbiology will have a significant role in the improvement of quality of life. It is ubiquitous and at the crossroads of all biological, environmental and medical sciences. Better understanding of these subjects through exhaustive learning and innovative research will help to bring out new and improved technologies, products and efficient processes. This will contribute to making many informed decisions about health, economic, environmental and public policy issues that will bring widespread societal appreciation.

### **We propose to provide:**

1. Diverse and challenging atmosphere for the overall progress of our students.
2. Ambience to improve the spirit of creativeness and autonomous thinking.
3. An atmosphere of mutual trust between the faculty and the students.
4. A student who is smart, efficient, ethical, competitive, socially and environmentally aware, financially and intellectually affluent yet kind and appreciative of societal obligations.
5. A faculty with diverse research interests that uniquely positions the department to respond to changing research opportunities.

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## **STRATEGIC GOALS**

The information includes our mission and targeted plan for the next 20 years. The description will encompass the matter related to academics, research and training, entrepreneurship and societal responsibility. The thrust areas identified are as follows:

### **I. Academics: Improvement of quality and relevance**

The department proposes to endow with a pioneering educational atmosphere. Our mission is to start up tomorrow's self-governing and scientifically aware leaders. We propose to achieve this goal by

- Providing best biotechnology prospectus and quality education
- Rigorous and innovative curriculum that focuses on emergent capabilities of students
- Rising innovative methods to provide vital skills in problem solving, critical thinking and communication.
- Arranging guest lectures by experienced faculty or scientists from national laboratories on latest developments in the subject.
- Organizing various programs, quizzes and competitions to magnetize recruit and retain outstanding candidates for the post-graduate degree in the subject.
- Organizing various programs like scientific writing skills, extension lectures, book review etc.
- Organizing numerous communication skill courses and skill enhancement course to improve student skill.
- Encouraging candidates from all walks of life with different cultural backgrounds.
- Reviewing the syllabus from time to time to ensure that its content covers the expansive fields of biotechnology and meets the needs of interdisciplinary research and industry demand.
- Providing student and faculty mentors to incoming students.
- Organizing campus interviews for initiating placement cell activities.

## **II. Research, Innovation and Collaboration**

The purpose of the strategy to ensure quality research is performing cutting edge scientific research on the critical factors relevant to the existing and future problems that have direct bearing on the health, nutrition, environment and agriculture of the world in general and India in particular. Our research has a vision to provide the scientific knowledge, innovation and new practices to increase productivity and quality. The focus of our research in the coming years will be on:

- Basic biotechnology research in molecular biology, plant biotechnology, applied microbiology etc.
- Common themes encompass enzyme structure-function studies, protein folding etc.
- To undertake research in the areas of plant molecular biology, microbial biotechnology, toxicology, phytochemistry etc.
- To develop facility for advanced techniques such as flow cytometry, HPLC, Real-time PCR etc.
- Developing the Department as Centre of Excellence and advanced center for biotechnology.
- To arrange workshop/conference for the budding scientists to acquaint them to the cutting edge technologies.
- To organize short term training to boost confidence in students.

## **III. Social responsibility**

It is our faiths that mature and health conscious society is the responsibility of educationists. By partnering with communities both inside and outside the university, the department wishes to support the application of the subject to address societal needs. It is felt that a high quality basic biochemical education to a broad range of students from different degree objectives such as science, arts, medical or commerce will ultimately help to address the problems of great importance to our economy and public policy.

- Conduct responsiveness programme for masses to explain them about the significance of cleanliness and its direct impact on the health.
- Educate the masses about the environmental issues
- Conduct special out-reach programmes for school and undergraduate students to make them aware of the advances in the field of biotechnology, to conduct small experiments to give them hands on training, to analyze and increase their critical thinking and encourage and enhance their scientific temperament.
  - To share the knowledge with the community about consequences of unhealthy environment and benefits of clean environment. Cleanliness among students can be promoted through many activities like cleaning of campus, classrooms, labs, poster making on cleanliness, waste segregation, essay writing, painting on cleanliness, poems recitation, group discussion, documentary videos etc.
  - To set up evening classes for educating adults enough *to be able to read various sign boards, understand some English, read local languages, and do some basic arithmetic*. Short term certificate and diploma courses for continuing education/ adult education/ value addition can be introduced.
  - To design and implement an innovative interdisciplinary *foundation program* to provide basic biological principles.

#### **IV. Entrepreneurship: From Science to Solutions**

Biotechnology Entrepreneurship: From Science to Solutions fills a critical gap in the biotechnology industry. For all the resources on how to start companies and on how to manage established companies in other sectors, there is a dearth of material on unique and critical issues in starting biotechnology companies, as well as managing the transition from start-up to established company. It is to this gap that Biotechnology Entrepreneurship is directed. By combining the voices of a diverse set of industry insiders with extensive experience in biotechnology, Biotechnology Entrepreneurship prepares nascent founders, managers, investors,

and other biotechnology company stakeholders to position themselves and their companies for commercial success.

Over the past several decades, research conducted at university and federal laboratories has become more recognized as a potent resource for new and established companies. Such research is providing a wide range of benefits—ranging from inventions that are the basis of many new and improved products to access to human capital in terms of students, graduates, and faculty with specialized technical knowledge. Frequently, these new inventions and specialized technical knowledge can be combined with business and capital resources to be the basis of new, paradigm-shifting companies.

We will provide or organize programmes on the followings:-

- Education and Training Support activities to Start-ups leaders/students
- Fostering Innovation and Enterprises Building between companies and candidates
- Awareness and Capacity Building for new budding Entrepreneurs students
- Fellowship/Internship programmes for students
- Mentorship and Networking Events for biotechnology faculties
- Fostering Innovation & Research in Biotechnology
- Promoting Entrepreneur Education & Learning
- Provide knowledge about small scale level biogas plants.
- To develop short term program to give awareness about Gardening/nursery business
- Organize short term program on identification of microbial sources and idea about to develop own organization at start up level.
- Provide services regarding identification of microbial at paid.
- Resource generation
- Introduction of vocational and diploma courses in biotechnology which directly develops expertise in skill and scientific techniques to span all aspects of the trade.