

"IIT Kanpur focuses on interdisciplinary research in biotechnology" - Prof Pradip Sinha, head, BSBE

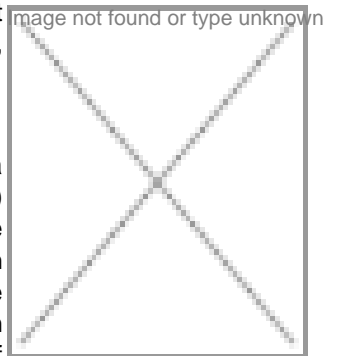
11 April 2005 | News



The new Biological Science and Bioengineering (BSBE) department in IIT Kanpur is the first facility of national importance that has been created with the MPLADS fund. In an exclusive chat, Prof Pradip Sinha, Head BSBE, shares his vision and future plans for the department.

How was BSBE established?

Arun Shourie pledged the entire sum of MPLADS (Member of Parliament Local Area sDevelopment Scheme) under the auspices of his membership in the Rajya Sabha (1999-2004) for a multidisciplinary initiative in Biology at the Indian Institute of Technology, Kanpur. Shourie was of the opinion that if the entire fund, to the tune of Rs 12 crore, supports a single cause then it would guarantee the success of the endeavor in all its dimensions. This pledge led to the creation of a new department of Biological Sciences and Bioengineering (BSBE) at IIT Kanpur on September 13, 2001. This was followed by recruitment of faculty, identification of areas of research, initiation of new academic programs and, finally, development of research infrastructure and facilities.



What are the key focus areas of research and academic programs in the BSBE department?

Research is currently going on in the department in the areas of developmental biology, human genetics, bioinformatics, genomics, structural biology, bioremediation, tissue engineering and biomaterials. The department has excellent facilities for cellular imaging techniques, cell and molecular biology, genomics, tissue engineering and computational biology. Major

facilities/equipments include DNA sequencers, confocal microscope, atomic force microscope, fluorescence video microscope, Affymetrix microarray platform, peptide synthesizer, besides high performance computational facilities.

The department offers two postgraduate academic programs-M Tech and PhD in Biological Sciences and Bioengineering. A new B Tech program has been introduced from the year 2004, which provides a unique fusion of biology with other basic science and engineering disciplines.

The emphasis in all the academic programs is on the synthesis of modern biology, science and engineering. The idea is also to gain from the natural strength in the campus - namely chemistry, physics, computer sciences and engineering disciplines.

What is your vision for the department?

Our goal is to create a new brand of students who have the understanding of a wide gamut of engineering topics and are capable of blending these concepts and principles with biology. I am sure we will soon create a new generation of undergraduate and graduate students who are capable of meeting the demanding needs of both academia and industry in life sciences, biotechnology and biopharmaceuticals. The future vision of MPLADS at IIT Kanpur would thus come true through the intellectual leadership of these new generations of researchers and students, and from their ability to seize the opportunities available in the forefront of biological research.

Rolly Dureha