

Rank 6 - Guru Gobind Singh Indraprastha University

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Rank 6 - Guru Gobind Singh Indraprastha University, New Delhi University School of Biotechnology

Research-driven curriculum rules

GGSIU is not only imparting the best education at the undergraduate level which is evident by the achievements of its students but the university also promotes research-driven academic atmosphere.

Guru Gobind Singh Indraprastha University (GGSIU) was established in 1998 and is recognized by the University Grants Commission (UGC) under section 12B of UGC Act. In March 2007, it received A-Grade accreditation from National Assessment and Accreditation Council (NAAC). The University School of Biotechnology (USBT) is situated in the sprawling university campus at Kashmere Gate, Delhi, and spreads over 16 acres.

Founded in 1999, USBT began with a five-and-a-half year integrated BTech/ MTech course in biotechnology with 11 semesters and PhD program. From 2004-05, the MTech program was delinked from BTech program and both are now offered under dual degree program. This has seen an increase in the number of students applying for the program. Admission to the programs is done strictly on the basis of merit adjudged through an all India common entrance test. The ratio of students applying and those taken was 130:1 for the year 2007-08. The school also has a research program leading to a PhD degree in biotechnology. Eleven students are pursuing research in the school under the guidance of the faculty members.

The school boasts of faculty members with expertise in diverse areas of modern biology and biotechnology including molecular biology, agricultural biotechnology, biomedical research, pharmaceutical biotechnology, environmental biotechnology and industrial biotechnology to name a few. The faculties also have links/collaborations with scientists in India and abroad, and as a result the school has a publication record of over 80 research papers in the last six years. The laboratories are equipped with the latest equipments costing over Rs 4 crore. The school has Rs 3 crore as extramural

funds with projects running in collaboration with DBT, DST, DRDO, AICTE and UGC. Every student is given a research topic during their final semester for doing inhouse research. The state-of-the-art 60-acre campus in Dwarka is in the pipeline where it is envisaged that new GLP compliant labs will be built up to attract industrial funding.

The school also plans to actively pursue projects and collaborative programs in plant/animal/microbial functional genomics, stem cell biology and industrial biotechnology in the future.

The alumnus of the biotech department have carved a place for themselves in prestigious institutes in India and abroad including University of Illinois, Ohio State University, Tufts University, Pennsylvania State University, North Carolina State University, University of Cambridge, IIT Chennai and IIT Mumbai.

“We train our students to take on the world”

Prof. PC Sharma, dean, University School of Biotechnology (USBT), GGSIPU

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According to you what is the USP of USBT?

We are very careful in selecting our faculty members. Every faculty member holds a PhD. Usually, apart from the IITs, most of the faculties in biotechnology institutes are teaching oriented, rather than research-oriented. Since ours is a government university, our endeavor is to make it a center of excellence in both teaching as well as in research, that is the emphasis at government universities. It is a challenge to create research facilities as it requires motivated, experienced faculties who can do independent research and also be able to attract funding to work on their projects. We have been actively working towards achieving that.

What are the challenges facing biotech education in India?

Biotechnology was touted as the next big thing after IT, but as far as education is concerned, we need to match the enthusiasm with upgradation of infrastructure and laboratory facilities and a greater awareness amongst students. Running costs are very low in IT, but in biotechnology, practical training is very important to make the students employable in the industry. Biotechnology is an infrastructure-based discipline, wherein a lot of investment is required in terms of laboratory equipment. Also there has to be a one-to-one interaction between the students and teachers to encourage students to do independent research. Today, many institutes are taking students in hordes while compromising on the quality of education, wherein, the students have no access to good laboratory facilities. Worse is that they charge heavily for the same unlike government institutes which have reasonable fees.

What is your opinion on the talent crunch in terms of what is taught in the universities not being what the industry needs or is looking for?

Industry needs to tell the institutes what they are looking for. We are ready to revise our syllabus to meet industry demands. Today, most of the biotech students are going for higher studies because they want to become scientists not technicians. Public-private partnership is the way forward wherein industry needs to forge greater partnership with the topmost universities to nurture talent.

What have been some of the achievements at USBT?

We train our students to take on the world. Our students have gone to prestigious research institutes such as NCBS, CCMB and IITs. Most of them have got fellowships in prestigious universities in the US with a fee waiver. We can proudly say, ours is the best government institute providing the best undergraduate study in biotechnology. The achievements of our students are a testament to that. We had a student qualify for Rhodes scholarship three years back. GATE 07 saw four out of the top 10 ranks from our department. Out of the 22 students who applied, 21 qualified GATE 07. Students also consistently perform well in GRE and NET exams.

Shalini Gupta