

## **The S&T Infrastructure Augmentation in Universities and Higher Educational Institutions of Country**



### **DST-FIST computer lab facility**

The 'Fund for Improvement of S&T infrastructures in Universities and Higher Educational institutions (FIST)' Program the Government of India's major infrastructure expansion program. The program largely aims at increasing the higher education and research at the university and academic sectors by improving and expanding the basic infrastructural facilities for teaching and conducting research in basic or applied sciences.

Currently, the program is operated at four levels (0, I, II, III) in competitive mode of support in 6 subject areas such as life sciences, physical sciences, chemical sciences, engineering sciences, Earth & atmospheric sciences, and mathematical sciences in post graduation (PG) colleges. The support is provided to all PG Science & Applied Science departments under Level 0 as a composite project in "Colleges as a whole" mode. The supports under Level I/ Level II/ Level III, is provided for science or applied science departments of all Universities and Academic Institutions. The financial support circumscribes four basic purposes include i) equipment, ii) networking & computational facilities, iii) infrastructural facilities, and iv) maintenance. The total financial support is limited to rupees 1.50, 3.0, 10.0 - and 20.0 Crore, respectively, for Level 0, Level I, Level II and Level III.

Since, the inception of FIST program, a profound impact has been observed in advanced research in current areas of S&T, and modern teaching set-ups. The young and dynamic researchers get benefited by availing a chance to display their research and innovative skills. The FIST Program has been at forefront in establishing state-of-the-art facilities for performing high end research.

The program has tried to remove the hurdles in solving current research areas by providing modern and advanced analytical equipments such as Automated DNA Sequencers, Ultracentrifuges, FACS, Scanning Electron Microscope (SEM), Molecular Imaging Systems, Thermo-Mechanical Simulator, Liquid Nitrogen Plants, Liquid Helium Plants, High Resolution Powder X-ray Diffractometers, X-ray Diffractometers, 400 MHz & 500 MHz FT-NMRs, Mass Spectrometers, Universal Testing Machines (UTMs), EPMA, Confocal Microscopes, Field Emission SEM, High Resolution Transmission Electron Microscopy (TEM), Protein Sequencing Platform etc.

Besides, the program has successfully established networking facilities such as Central Computer Labs with latest Hardware, Software's and Cloud Computing facilities. The communication technology based infrastructures such as Grid Computing, Networks and Communications systems, and Cloud have been installed in many engineering departments. The S&T departments of all major colleges and universities have been supported and benefitted by grants for procuring books and other study material for libraries.

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