

# University of Delhi

THE NEW MILLENNIUM: A NEW BEGINNING 2000-2005



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## The University

The University of Delhi, which began life in 1922 with just three colleges and 750 students, has become one of India's major institutions of higher learning addressing the ever-increasing aspirations of her people for tertiary education of acceptable quality and relevance. In this process, the University has itself grown and diversified phenomenally over the past decades. With its 78 colleges, 84 postgraduate departments, over 300,000 students and about 7,000 teachers, the University of Delhi is now the largest in India and among the largest in the world. The University runs undergraduate, postgraduate and research programmes, in liberal disciplines, in professions and in interdisciplinary and applied areas. The University has through these eighty years created and sustained a number of world-class centres of undergraduate education. It has also demonstrated its excellence in research and postgraduate education in many disciplines. It has been home to a large and vibrant academic community, at the forefront in the generation and transaction of new ideas, active in various departments of public life. Each of the past decades has had its expectations from the University of Delhi. The University on its part has been able to adapt, transform and gear itself to incorporate these expectations into its institutional agenda, struggling all the while not to compromise its essential characteristic as a centre of excellence in higher education.

## Challenges and Opportunities

**T**he new millennium brought with it new challenges to the University of Delhi. Much of that had to do with the growing and diversifying aspirations of young people and the need to make their engagement with the University as meaningful and as appropriate to the times as possible. This was the first challenge of transforming and updating curricula and initiating a process of academic reforms. Many postgraduate departments were severely understaffed with a large number of positions lying vacant. There was a need for embarking on faculty recruitment almost on a war footing. While doing this, it was also necessary to attract the best talent available in the country and abroad to a career in the University of Delhi. This was the second challenge. The University's physical infrastructure was proving inadequate to meet the needs of the growing numbers. It was also in a state of disrepair. The campus was calling out for a drastic expansion of building space and restoration and renovation of the existing buildings and facilities. The campus also needed to be given a face-lift to create a milieu conducive to a vibrant social and cultural environment. There was also a need for better classrooms, seminar rooms and laboratories, with all the necessary modern equipment and amenities. All these put together constituted the third challenge.

The postgraduate campus of the University has grown phenomenally over the decades. However, the Departments have become somewhat inward looking in their preoccupation with teaching and research in their own respective areas. There have

been very few occasions and platforms for the larger academic community of the whole campus and the colleges to congregate in an atmosphere of collegiality. A fourth challenge was therefore to energize the overall academic environment on the campus through the creation of large academic platforms and events for the entire campus community to participate in, and through the setting up of structures within interdisciplinary spaces for collaborative efforts at research and teaching across departments.

The budget constraint was becoming dominant, as there were not enough resources for maintenance, let alone for development. It was imperative that the University persuade the University Grants Commission to allocate more resources, and look beyond the UGC to mobilize resources for all these ambitious developmental plans. This was the fifth challenge.

In a short span of time, five years, we sought to transform these challenges into opportunities. And, this we did through a process that involved participation of, and thus generating a sense of ownership among, the various components of the University community. The transformative process was carried out in a way that ensured their sustainability, by bringing about legislative changes and building in new processes and provisions into the administrative and governance structures, and above all by creating broad consensus among the critical actors. In what follows, we attempt to present glimpses of some of our efforts to address these challenges.

## Academic Reforms

**T**he academic processes constitute the core of the University. Among the millennium initiatives, the highest priority was attached to academic reforms. To strengthen teaching and learning, it became necessary to transform the very core of the academic processes, an evaluation system which depended entirely on annual examinations. In July 2003, the University introduced a system of internal assessment as an integral part of the evaluation system. The internal assessment system comprised class tests, in-house examinations, written assignments, tutorials, project reports, term papers, seminars and fieldwork, and carried a total weightage of 25%. To make this elaborate evaluation system work according to laid down procedures and schedules, it was necessary to put in place certain critical structures, such as monitoring committees both at the College and at the University level.

In order to ensure that there were the requisite 180 teaching days every year, a six-day teaching week was re-introduced with effect from July 2003. Also, it was legislated that teaching would commence on July 16<sup>th</sup> and would end not earlier than March 23<sup>rd</sup>. The system of tutorials and preceptorials was strengthened. Mentoring by teachers was institutionalized. A system of academic monitoring and supervision, and student-faculty committees was introduced essentially to ensure that the academic processes are organized effectively.

## Improvements in Admission Procedure

Admission to undergraduate programmes had been an enormously cumbersome process. A candidate trying for admission to a variety of courses in a number of colleges had always had to go through the highly tedious process of visiting individual colleges and making separate applications. A computerized system of centralized admission was initiated in 2004. Under this system, a candidate can now use one pre-admission form to exercise his/her choice for as many colleges as desired. The centralized form obviates the necessity of moving from college to college in the hot summer months and filling up forms in each college. The centralized forms are scanned at the University and the data are transmitted to the colleges where the candidate seeks admission. This system was hailed as a brave new step forward by civil society. One other innovation which has been introduced during the last five years has been the system of Open Days, where University officials provide information on courses, colleges and admission procedures, and clarify doubts and misconceptions about the admission process among prospective candidates and their parents. The University has also introduced a system of reservation for candidates with physical disabilities. Care has also been taken through a centralized procedure to streamline the admission of candidates belonging to scheduled castes and scheduled tribes.



## New Dimensions in Research

**T**he University of Delhi has a glorious tradition of research and advanced studies in various disciplines. There are many Departments of Special Assistance and Centres of Advanced Study of the UGC in the various faculties of the University. The UGC continued to assist these Departments through the Ninth and the Tenth Plan periods. The upgradation of the Department of Education as the Institute of Advanced Studies in Education (IASE) and the Maulana Azad Centre for Elementary and Social Education (MACESE) by the Ministry of Human Resource Development, Government of India was institutionalized when the UGC was persuaded to assimilate the faculty positions under the IASE scheme into the maintenance grant of the University on the conclusion of the Ninth Plan period. While the older science departments continued to make their mark as leaders in their respective fields, some of the newer departments, particularly those in life sciences, earned accolades for their work in the very frontiers of science and its applications.

### ***Sciences:***

The past five years saw several significant new research projects in progress, some of them making important contributions furthering the knowledge horizon. The science departments have been particularly active in this matter.

Scientists at the Department of Plant Molecular Biology successfully participated in the international consortium on rice genome sequencing. The project was funded at the national level by the Department of Biotechnology, Government of India. The



Department of Plant Molecular Biology is currently involved in sequencing a non-pathogenic Mycobacterium strain for developing a vaccine in the long run.

The Department of Biochemistry successfully developed a test to detect HIV (AIDS) in a drop of blood. The Naked Eye Visible Agglutination assay or NEVA is an instrumentation free test with no need of electricity, and is one of the very few tests in the world that can be performed on whole blood, even from a finger prick. The technology of NEVA HIV has won several awards.

The Centre for Genetic Manipulation of Crop Plants and Department of Genetics at the University of Delhi South Campus have developed two hybrids in mustard DMH-1 and DMH-11 which have, on an average, 30% more of productivity over the best national varieties of mustard. These hybrids are currently being tested in farmer's field. The commercial production of the hybrid seed will begin from the year 2006. The research on development of these hybrids has been supported by the National Dairy Development Board.



Scientists at the Centre for Environmental Management of Degraded Ecosystems (CEMDE) have been involved in the development of site-specific and locality-specific restoration technologies for the revegetation of highly degraded landscapes such as morrum mined-out areas, overburden dumps of Bhatti mines and extremely desertified land of the Asola wildlife sanctuary in Delhi. The technology package developed has now been transferred to the Department of Forests of the Government of Delhi. CEMDE provides the necessary training to the eco-taskforce established by the Department of Forests, and also gives assistance with regard to the inputs needed for the rehabilitation programme. CEMDE has collaborated with the Delhi Development Authority in the establishment and maintenance of the Yamuna Biodiversity Park and the Aravalli Biodiversity Park, which are meant to recreate and preserve the lost natural heritage of Delhi. The mission of these Biodiversity Parks is to serve as repository and heritage of the biodiversity of the Yamuna river basin and the Aravalli ranges, with ecological, cultural and educational benefits to society.

Scientists at the Delhi College of Engineering (DCE) have developed a bio-diesel that can be used as fuel for passenger cars. The design of high capacity bio-diesel reactors of up to 2000 litres is in progress. Another DCE innovation in the energy sector is the development of a liquid nitrogen fuelled reciprocating engine.

One of the important recent achievements of the scientists in the Department of Chemistry, who have been doing extensive research in the development of nanoparticles-based drug delivery technologies, is the development of a reverse micelles based process for the synthesis of hydrogel and 'smart' hydrogel

nanoparticles for encapsulating water-soluble drugs. This technology has been patented in India and the US. This laboratory has also developed an ophthalmic formulation of NSAID drugs for which it has got patents in India and the US. The group is now working on nanotechnologies which have applications in enzyme therapy, treatment for leukemia, and a drug-less therapeutic process without side-effects, for cancer. The Department of Chemistry has recently created an LCT Mass Spectrometric facility under the FIST programme of the Department of Science and Technology, Government of India.

The Department of Geology has been actively engaged in many thrust areas of research in earth sciences. A Leica Workstation DMRX with image analysis system with provision for polarising transmitted and reflected light microscopy, differential interference contrast, phase contrast microscopy, digital photography and quantitative analysis have been installed recently in the Department.

The Department of Botany has been contributing significantly in several areas of plant sciences, particularly in the assessment of genetic diversity at the molecular level and understanding morpho-genetic phenomena in different groups of plants. Under the FIST programme, the Department has acquired a Confocal Laser Scanning Microscope. This facility gives a fillip to research in structural biology.

The Department of Mathematics is known for its recent contributions in Analysis, such as Spectral Synthesis in hypergroups, quotient rings of algebras of functions and operators, role of orthogonal polynomials in differential

equations, Sobolev inequalities, matrix ordered spaces, bounded mean oscillation spaces, Hardy inequalities, tensor products of operator spaces, Riemann-Hilbert problem, and in other areas such as group-explicit methods in parallel programming and optimization techniques. The Department has set up recently a laboratory with modern computation facility.

The VP Chest Institute is a constituent of the University specializing in research and higher learning in pulmonary medicine. The Institute went through a phase, during the last five years, of modernizing their research facilities. A state-of-the-art Animal House was commissioned. A spiral CT Scan has been installed and a sophisticated 32 Channel Sleep



*VP Chest Institute*

Laboratory has been established, which enhance considerably the Institute's capability at diagnosis.

### ***Social Sciences and Humanities:***

The Departments of Social Sciences and Humanities in the University of Delhi have always been leaders in research. The Social Science Research Council of the USA has acknowledged the enormous contribution of the University of Delhi to social science research in this part of the world. Interdisciplinary programmes in social sciences got a major boost during the recent

years, while many disciplines acquired new and prestigious programmes.

The Department of Political Science which was already a Department of Special Assistance was awarded the assistance for strengthening of infrastructure in the Humanities and Social Sciences by the UGC. The Department's projects on Local Governance in a Comparative Perspective and Distinctiveness of Indian Democracy, among others, have made significant progress.

The Department of Chinese and Japanese Studies added into its fold Korean Studies and got its new name of East Asian Studies. Globalization and Institutional Reforms in East Asia and Literature in the Twentieth Century in East Asia are some of the major projects that have been completed and publications are forthcoming.

The Department of Sociology has completed a major international collaborative project on Ethnography of the State and another on Trends in the Methodology of Social Research.

There were contributions from the Department of History towards documenting the anti-colonial struggle in India in the form of two three-volume sets of documents relating to the Freedom Struggle in a project supported by the Indian Council for Historical Research. The Department has also been active in the areas of new social history, interface of memory and history, monetary history, history of art and architecture, landscape archaeology and the emergent sub-field of 'historical fieldwork'.

The Department of Psychology is known for their work in recent

years in cultural psychology and psychohistory. An important publication on Methodology and Fieldwork came out of the Department of Anthropology in 2004. Department of Economics is known for its contributions to economic theory and development economics. Departments of Law, Management, Social Work and Education of the University of Delhi are leaders in their respective areas of professional expertise. The Department of Education, including teachers of the Experimental Basic School attached to it, made significant contributions to the exercise of textbook revision initiated in recent years by the Government of Delhi. The Department has also been active in providing resource support to governmental and non-governmental initiatives at universalizing elementary education. Departments of languages have also made significant contributions in their respective areas. The Department of Linguistics is known for their work in the past few years in theoretical linguistics, sociolinguistics and applied linguistics.

The University hosted the All India Public Hearing on the Rights to Food, where people's movements took part together with many policy makers and economists including the Nobel Laureate Professor Amartya Sen.

The Developing Countries Research Centre became a full-fledged Centre of the University. The Centre undertook a number of international collaborative projects including Rights, Representation and the Poor; Conflicts and Institutional Change in India, Brazil and South Africa; and Truth, Reconciliation and Human Rights in India and South Africa. It also completed a comparative study of Poverty Eradication and the role of local

institutions in three states of India. A major research programme of the Centre was on Gender and Migration in Asia under which an international seminar was held leading to the publication of five volumes currently in press.

The Women Studies and Development Centre had a number of research programmes including the decennial review of the Platform of Action of the Beijing World Congress of Women. It has been engaged in a project on Feminism in an Indian Perspective, which has involved scholars and activists from all over India in various fields.



## Library System

**A** comprehensive legislation on the governance of the Library system was enacted in 2004 to make the system more effective and efficient. Rs 8 million from the developmental grants to the University under the Ninth Plan was reallocated to the Library system, over and above the regular developmental grant earmarked for it. Plans for the restoration of the Library building has been approved by the University. The proposal is at present being considered for approval by the Government of Delhi. The Braille Library has been modernized and upgraded. The University of Delhi has entered into an agreement with the UGC and the Inflibnet to participate in the country-wide Infonet programme. The University Computer Network has been provided 2 Mbps of additional bandwidth, and more importantly, subscription to a whole consortium, running into hundreds of electronic journals in sciences, social sciences and humanities.





## Upgrading the University Science Instrumentation Centre



**M**any instruments at the University Science Instrumentation Centre had not been functional for a long time due to paucity of grants for repairs and spares. For the first time, the University provided additional grants, not only for making dysfunctional instruments functional and for their upgradation, but also for acquiring new instruments. Under the Tenth Plan grant, the University Instrumentation Centre has acquired a Micro-Raman Laser Spectrometer used for determination of phase chemistry and other applications in physics, chemistry, biology, microbiology and forensic science.

## Academic Infrastructure



**M**uch of the academic infrastructure available on the North Campus had been constructed in the 1940s and 1950s. The number of postgraduate departments, faculty, courses and number of students have since increased manifold. However, the infrastructure has not undergone any expansion worth the name in the last three or four decades. The need for extra space has been experienced acutely in the Faculty of Arts complex, where the departments of the Faculties of Arts, Social Sciences and Mathematical Sciences were located. With the passage of time this was aggravated by the expansion and diversification of faculty. Several members of faculty did not have any office space, and many others were forced to share office space. Addressing this need, two new buildings with state-of-the-art facilities have been constructed next to the Faculty of Arts. The first houses the Faculty of Mathematical Sciences. Opposite this, is the other new building which is the new home for the Faculty of Social Sciences. As a result of this, much more space has been released within the Old Faculty of Arts Complex for the members of the Faculty of Arts.

The Life Science Departments of the South Campus have been pioneers in the frontier of research, and have a longstanding need for more space for their academic and research programmes. In response to this, a new Academic Block with modern features is being constructed in the South Campus, and is nearing completion. This building will house the Life Sciences Departments.

There have been several interdisciplinary and applied research, training and extension activities in the University, and some of them are being pursued through specialized Centres set up for this purpose. An Academic Research Centres Complex has come up opposite Khalsa College to house these activities. This Complex has several common facilities like an auditorium which can seat 250 persons, a number of large multi-purpose rooms which can be used for lectures, seminars, training laboratories, workshops and a cafeteria. In this building, space has been allocated for the Developing Countries Research Centre, the Women's Studies Development Centre, the



Centre for Science Education and Communication, the Intellectual Property Rights Centre, the Institute of Humanities, the Centre for Psycholanalytic Studies, the Centre for Interdisciplinary Studies of Mountain and Hill Development and the Professor DS Kothari Centre for Science, Ethics and Education. One floor of this building is allocated to the Department of Education to locate its diverse activities and house its various facilities, including those under the IASE-MACESE Scheme of the Ministry of Human Resource Development, Government of India. This is in response to the longstanding need for more space recognized right since 1979 when the Central Institute of Education merged with the University of Delhi as a full-fledged Department of Education.

A Biotech Centre is being established in the South Campus with funding from the Government of Delhi. This Centre is meant to be the nucleus of University-Industry interactive research in the areas of enzymes of industrial utility, transgenic crops, diagnostics for diseases and genetic disorders.

In addition, a comprehensive attempt was made to equip all faculty offices with computers connected to the campus-wide network and all classrooms with appropriate audiovisual equipment. Most newly appointed members of faculty, especially in the sciences, were provided with a seed-grant for setting up their laboratories.

