



University of Delhi
Celebrating 93 years
of Excellence

of EXCELLENCE

RESEARCH PROFILE 2015

Research Council
University of Delhi

University of Delhi

Celebrating 93 years of Excellence

Research Profile 2015



The Research Council
University of Delhi

VICE CHANCELLOR'S WORDS



There is something about this University that works like magic for all of us and helps us contribute better in the larger interest of the nation and the society. I believe without any doubt that the University has so much potential that it will provide a direction to the country. I see how the young minds enter the University with such vision, zeal and excitement to make significant contributions selflessly and uplift and build the nation.

The University of Delhi has, in keeping with its traditions, moved from strength to strength. It has maintained its number one rank in the list of Indian Universities for many years now. This is a tribute to the inherent strength in the systems and institutions of the University of Delhi. The University has delivered high quality research in the niche areas, strengthened its facilities and professional networks to be an academic leader while serving the country in an effective and dedicated manner.

Prof. Dinesh Singh

RESEARCH COUNCIL

Chairperson

Prof. Malashri Lal

Dean Research (Physical & Mathematical Sciences)

Prof. Ajay Kumar

Dean Research (Life Sciences)

Prof. M.M. Chaturvedi

Dean Research (Humanities & Social Sciences)

Prof. Pami Dua

Deputy Dean Research

Dr. Deepika Bhaskar

FOREWORD



The Research Profile of the University of Delhi has seen an upward shift in the last four years through significant new programmes and their visible impact. The Innovation Projects for undergraduate colleges has perhaps had the greatest effect in terms of bringing confidence through hands-on projects and skill in proposal writing, implementation, and reporting. The Vice Chancellors of the University of Edinburgh, UK, and the University of Melbourne, Australia, our honored guests at Antardhvani Academic and Cultural Festival 2015, expressed their high admiration for such an initiative spearheaded by the Vice Chancellor of the University of Delhi, Prof. Dinesh Singh. Logging an impressive number of 236 projects, these have engaged around 2500 students and 750 faculty members. Industry interface has brought in external assessment and appreciation from business leaders and the public. One may say that the Innovation Projects have changed the mindset in undergraduate education.

The Research Profile also demonstrates the outstanding achievement of eminent scientists whose work at the University of Delhi has attracted the highest DST PURSE Grant of the Government of India for two phases in succession. Awards and distinctions have been received at the highest levels. Publications being a desirable documentation of academic scholarship, the Research Council has issued, *Delhi University Journal of Undergraduate Research and Innovation*, the first such series in the country, and possibly, in the world.

The responsibilities of the Research Council further extend to overseeing the doctoral programmes of the University, Non-NET fellowships, and disbursement of travel grants for research, academic approvals for conferences, Research and Development grants across disciplines and other research related activities. The Council maintains a liaison with all Departments and colleges in order to encourage and strengthen their research output.

In presenting the Research Profile 2015, we recognize the inspiring leadership and vision of the Vice Chancellor, Prof. Dinesh Singh, the meticulous hard work of the three Deans Research- Prof. Ajay Kumar (PS&MS), Prof.M.M. Chaturvedi (LS), Prof. Pami Dua (H&SS), and the full-time dedication of the Deputy Dean Research, Dr. Deepika Bhaskar.

Prof. Malashri Lal
Chair, Research Council,
Dean of Colleges,
Dean Academic Activities & Projects.

PREFACE

The University of Delhi revels in having the highest standards of research in the country with eminent research faculty to match the best in the world. Its strong commitment to excellence in research is reflected by perusal of its funding from extramural sources which amounts to more than 300 crores and over 400 doctorate degrees every year. The University has encouraged undergraduate research in a big way through Innovation Projects by allocating more than 350 projects to 65 colleges in the past two years with a grant of more than rupees 20 crores.

The major task of the Research Council is to facilitate and support high quality research in the University, coordinate with various academic and funding bodies, institute awards for research recognition, support undergraduate research and similar roles. The Research Council has achieved the following in last two years:

A. Journal/Books released by the Research Council:

1. Research Profile of the University, 2014
2. Research Profile of the University, 2015
3. Innovation Projects@Delhi University: A Journey of Discovery
4. Innovation Projects- An Undergraduate Research Initiative of University of Delhi
5. The DU Journal of Undergraduate Research and Innovation- Issue 1
6. The DU Journal of Undergraduate Research and Innovation- Issue 2
7. The DU Journal of Undergraduate Research and Innovation- Issue 3

B. DST PURSE Phase-II

C. Research and Development Grant

D. DRDO- Centre of Excellence Proposal

E. IPR Cell and Patent Fund

F. Shodhganga- Digitization of thesis

G. Overall management of the Innovation Projects 2013-15, 2015-16

H. Innovation Awards and Teaching Excellence Awards

I. University-Industry Interface and guidelines for proposals as Business Plan

J. Internal Quality Assurance Cell- Quality Benchmarks and Quality Policy

K. Vice Chancellor's Student Fund

L. Student Travel Grant (Empowered @100 students in last six months)

M. Revision of Ordinance VI-B

N. Scholarships (JRF, SRF, Non-NET, others)

O. Academic Approval of Conference Applications

P. Compilation of National level MoU

Q. College Teachers Travel Grant

R. Extramural Research proposals/Research Projects

The Research Profile is an amalgamation of all this information and much more, thereby, revealing the highest standards of research in the University and setting trends for the young minds to build upon and contribute significantly to this strength of the University. The encouragement and support for such initiatives is highly appreciated.

Deepika Bhaskar

Deputy Dean Research

EXPERIENCE- STUDENT INTERNS

I had heard that one must think of keeping alternative plans as your priorities and needs change with time. I never believed that. But on the second day of my internship when I was told of various sub-projects, I got my answer. The work assigned to us was compiling the Research Profile of the University. This was the answer to what I had heard as that very moment my heart said "research is done with passion, not of need and passion never changes, neither with time nor by needs."

The very moment I took the project in my hand even without knowing its requirements/ boundaries, guided by Deepika mam and supported by everyone else, I started paving my way into an unknown arena and today what you have in your hands is the second edition of the same Research Profile developed as part of my internship project.

The biggest exposure was collating the contribution of 9000 faculty members of the University. Also I came to know a lot about various basic and advanced concepts of research and how they reach great heights with the administrative support of the Research Council of the University.

It has been a great experience and the learnings from the projects have been tremendous. I thank all those who have helped me in the process.

Satyam Jain

My internship has been a great and inspiring experience and working on the Research profile has been very informative, yet a challenging experience. We collected data from various sources that was very exhausting at times. Our mentor gave us apt solutions for all the difficulties that had come up during our work on this book. We have tried to add some new topics in this edition. It has been a very enriching experience and I have learnt a lot about the University and research in the process.

Sonam Pathak

CONTENTS

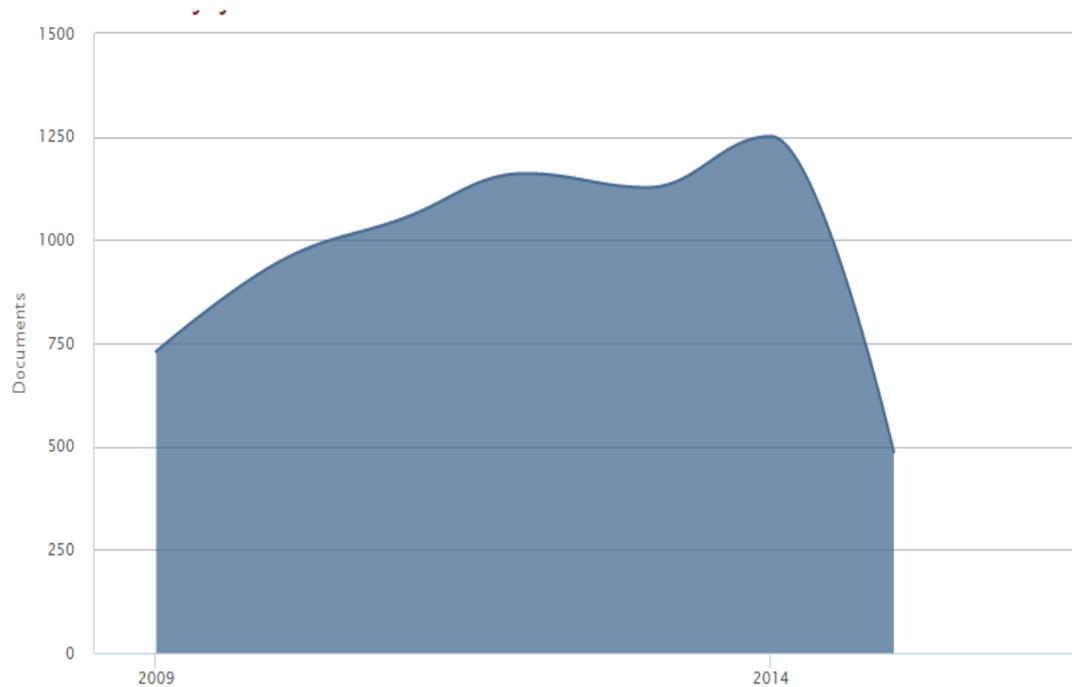
- 1) Publication Profile
- 2) DU- A Member Of Following Higher Education Networks
- 3) Awards and Honors to faculty
- 4) Ongoing Research Initiatives
- 5) DST-Purse Grant
- 6) Research and Development Grant
- 7) Research Grant with Sanctioned Grant more than Rupees one crore
- 8) SAP & ASP grant from UGC
- 9) Sponsored Research Projects in last five years
- 10) Number of Ph.D. awarded in last four years
- 11) Patents from University of Delhi
- 12) Undergraduate Research Initiative- Innovation Projects
- 13) The Delhi University Journal of Undergraduate Research and Innovation
- 14) Inspired Teachers Network and Innovation Club
- 15) Innovation Awards- Best Innovative Ideas and Best Displays
- 16) The Delhi University Journal for Undergraduate Research and Innovation
- 17) Innovation Club, Incubation Centres and Inspired Teachers Network
- 18) Global Research Initiatives
 - i. Memorandum of Understanding
 - ii. International Exchange and Mobility
- 19) Cluster Innovation Centre
- 20) Other Strategic Initiatives
 - i. GIAN
 - ii. SHODHGANGA
 - iii. Digital India
- 21) Research Facilities at DU- Biotech Centre, CIF, University-IT (IT-Network)
- 22) Digital Resources of the library
- 23) Research Fellowships and Vice Chancellor Student's Fund
 - a. Travel grant to Students
 - b. JRF/SRF Scheme
 - c. Vice Chancellor Student's Fund
 - d. UGC Non-NET Fellowships
 - e. Indira Gandhi P.G. Scholar for Single Girl Child
- 24) Major Areas of Research

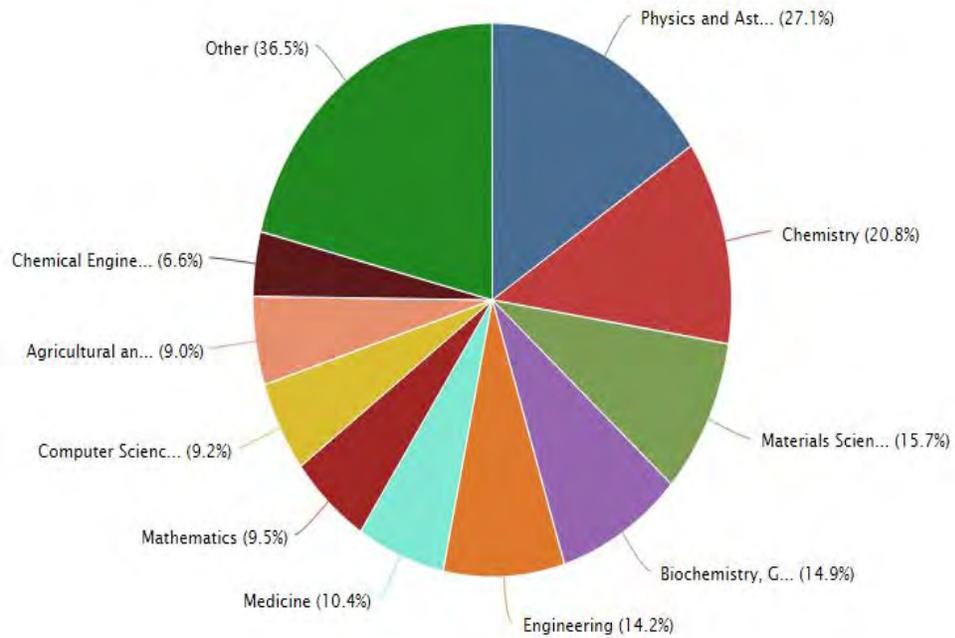
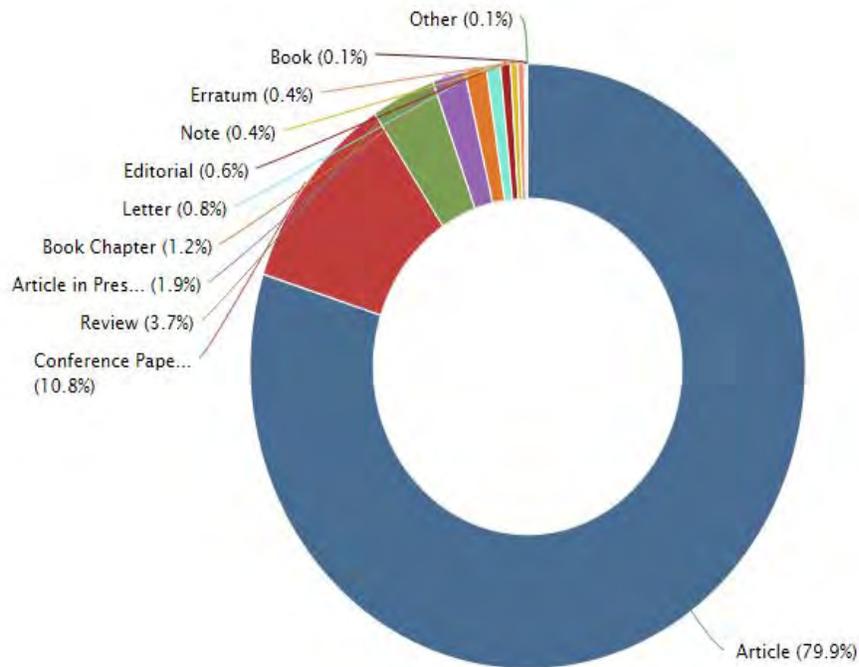
PUBLICATION PROFILE

Number of total Publications from University of Delhi 2010- 2015

According to the Scopus database, the faculty of the University of Delhi has published 7686 documents in last five academic years. The number of publications each year in high quality journals is constantly increasing. The number has risen from 1059 in 2010 to 1353 in 2014. The H-index of the University has also increased to 91, which is the highest in India.

Year	Number of Publications
2015	513 (Till June 2015)
2014	1353
2013	1229
2012	1287
2011	1186
2010	1059





Representation of type and subject area of publications of University of Delhi in past five years

Scopus database covers 50 million records, 21,000 titles and 5000 publishers. It is the largest abstract and citation database of peer-reviewed literature. It delivers the most comprehensive overview of the world's research output in the fields of science, technology, medicine, social sciences and Arts and Humanities. It covers more than 4300 titles of the subject area of Life Sciences, more than 6800 titles from Health Sciences field with 100% Medline coverage, more than 7200 titles from Physical Sciences and more than 5300 titles from Social Sciences and Humanities

DELHI UNIVERSITY RANKING

Number One in India

The India Today - AC Nielsen survey has ranked the University of Delhi as number one in 2014 and also 2015, for the third and fourth consecutive years.

- 39 - QS BRICS
- 45 - The Best Global Universities in Asia-US News and World Report 2014)
- 81 - QS Asia
- 421- QS World, 1st in Indian Universities
- 97 - Youth Incorporated Education Times and Rediff.com)

TOP AWARDS AND HONOURS

2014: Padma Shri Awards for the University of Delhi



Vice Chancellor Prof. Dinesh Singh, is recognized for his “distinguished service” to the field of education and is awarded the Padma Shri 2014. His philosophy of higher education focuses on the practice of interactive learning and new pedagogy that links academic courses to projects, sports, culture, to achieve the goal of ‘integrating mind body and heart’. A renowned mathematician and a committed follower of Gandhian values, Professor Singh’s vision of an integrated, interdisciplinary model of university education has found high recognition among the portals of policy makers both in India and Abroad.



Dr. Mahesh Verma is presently working as a Director – Principal of Maulana Azad Institute of Dental Sciences (MAIDS), New Delhi, India. He is President of Indian Academy of Restorative Dentistry (IARD) and Vice President of Dental Council of India.



Professor Rehana Khatoon, Department of Persian, University of Delhi is recognized for her “distinguished service” in literature and education and is a recipient of the Padma Shri 2014. She has to her credit many publications including a source book Delhi Past & Present : Focus on Persian Sources.



Shri Keki N Daruwalla-A visiting scholar for a few months at South Campus, University of Delhi, is a recipient of the Padma Shri 2014 for his 'distinguished service' in literature and education. He is a renowned poet and leading literary scholar.

VISITOR'S AWARD, 2015 FOR INNOVATION

The University of Delhi is the recipient of the prestigious Visitor's Award 2015 for Innovation received by Profs. Vijay K. Chaudhary & Amita Gupta, University of Delhi South campus (UDSC), for developing a Tuberculosis Detection Kit. A bench to bedside success story to meet India's need: University research leading to a product, TB Confirm, a rapid diagnostic test for Tuberculosis. TB Confirm is a rapid test that allows for the detection of *Mycobacterium tuberculosis* (Mtb), the bacterium that causes tuberculosis. A rapid test in Immuno-chromatographic format that allows for easy and rapid screening of specimen for confirmation of growth of tuberculosis causing bacterium *Mycobacterium tuberculosis* (Mtb). This test can be performed in 20 minutes.



**Honorary Degree of Doctor of Science, National University of Ireland, Cork, Honorary Degree of Doctor of Science University of Edinburgh, Scotland
Honorary Degree of Doctor of Science, University of Houston, USA**
Prof. Dinesh Singh

Vigyan Gaurav Award

Prof. Rajendra Prasad, Director, Vallabhbhai Patel Chest Institute (VPCI)

Subramaniam Bharati Prize for contribution to Indian Literature

Prof. Sudhish Pachauri

Biotech Product and Process Development and Commercialization Award-2014

Prof. Vijay K. Chaudhary

Infosys Award for Social Sciences

Prof. Upinder Singh

Amartya Sen Award for advancement of knowledge of Social Sciences

Prof. Anu Kapur

President, The Indian Econometric Society

Prof. Pami Dua

Members of Scientific Advisory Committee to the Prime Minister

Prof. Dinesh Singh

Prof. B.K. Thelma

Shanti Swarup Bhatnagar Awardees

Prof. D.P.Sarkar, Biochemistry

Prof. Anil K.Tyagi, Biochemistry

Prof. A. C. Jain, Chemistry

Prof. Naba Kishore Ray , Chemistry

Prof. S. K. Tandon , Geology

J.C.Bose National Fellow

Prof. Deepak Pental, Genetics

Prof. Anil K. Tyagi, Biochemistry

Prof. B. K. Thelma, Genetics

Prof. G.V.R.Prasad, Geology

Prof. A.K. Tyagi, Plant Molecular Biology

Stree Shakti Science Samman

Prof. B. K. Thelma, Genetics

SERB Women Excellence Award

Dr. Vandana Mishra, Environmental Studies

Dr. Tapasya Srivastava, Genetics

Pearson Award in Higher Education, 2014

Prof. Sunil Kumar

Best Employee with Disability (Female) National Award

Dr. Neha Kapoor

Fellows of Indian National Science Academy

Prof. Deepak Pental, Genetics

Prof. Akshay K. Pradhan, Genetics

Prof. Anil K. Tyagi, Biochemistry

Prof. D.P.Sarkar, Biochemistry

Prof. A.K. Tyagi, Plant Molecular Biology

Prof. J.P.Khurana, Plant Molecular Biology

Prof. Paramjit Khurana, Plant Molecular Biology

Prof. Anil Grover, Plant Molecular Biology

Prof. Madan Mohan, Plant Molecular Biology

Prof. HY Mohan Ram, Botany

Prof. NS Rangaswamy, Botany

Prof. AN Mitra, Physics

Prof. Avinash Khare, Physics

Prof. Rup Lal, Zoology

Prof. K. Muralidhar, Zoology

Prof. B C Das, ACBR

Dr. Ashima Anand, VPCI

Prof. H S Randhawa, VPCI

Prof. N K Ray, Chemistry

Prof. S K Tandon, Geology

Prof. Talat Ahmad, Geology

Professor D M Banerjee, Geology

Prof. Mihir Deb, Geology

Fellows of National Academy of Sciences, India

Prof. Deepak Pental, Genetics

Prof. Vani Brahmchari, ACBR

Prof. Anil K. Tyagi, Biochemistry

Prof. V.K.Chaudhary, Biochemistry

Prof. P.C.Ghosh, Biochemistry

Prof. D.P.Sarkar, Biochemistry

Prof. A.K.Bhatnagar, Botany

Prof. Akshay K. Pradhan, Genetics
Prof. M.V Rajam, Genetics
Prof. T. Ahmed, Geology
Prof. Debajyoti Choudhury, Physics & Astrophysics
Prof. A.K. Tyagi, Plant Molecular Biology
Prof. J.P.Khurana, Plant Molecular Biology
Prof. Paramjit Khurana, Plant Molecular Biology
Prof. Anil Grover, Plant Molecular Biology
Prof. Indranil Dasgupta, Plant Molecular Biology
Prof. K. Muralidhar, Zoology
Prof. Rup Lal, Zoology
Prof. Umesh Rai, Zoology
Prof. Madan Mohan Chaturvedi, Zoology
Prof. R.C. Khuad, Microbiology
Prof. Arun Sharma, Plant Molecular Biology

Fellows of Indian Academy of Sciences

Prof. Deepak Pental, Genetics
Prof. Anil K. Tyagi, Biochemistry
Prof. D.P.Sarkar, Biochemistry
Prof. Sanjay Jain, Physics & Astrophysics
Prof. Debajyoti Choudhury, Physics & Astrophysics
Prof. A.K. Tyagi, Plant Molecular Biology
Prof. J.P.Khurana, Plant Molecular Biology
Prof. Paramjit Khurana, Plant Molecular Biology
Prof. Anil Grover, Plant Molecular Biology
Prof. Indranil Dasgupta, Plant Molecular Biology
Prof. K.Muralidhar, Zoology
Prof. M. Jayananda

Elected Fellow of Indian National Science Academy

Prof. Rup Lal
Prof. M.V.Rajam

DU - A MEMBER OF FOLLOWING HIGHER EDUCATION NETWORKS

1. Association of Commonwealth Universities (ACU)
2. International Association of Universities (IAU)
3. International Association of University Presidents (IAUP)
4. Asia Pacific Association for International Education (APAIE)
5. Association of Indian Universities (AIU)
6. Association of University of Asia and the Pacific (AUAP)
7. Commonwealth Universities Study Abroad Consortium (CUSAC)
8. Universitas 21 (U21)
9. World Cities World Class Universities (WC2)
10. Global Problem Solving Consortium (GPS)

RESEARCH INITIATIVES

Research initiatives by University of Delhi in various spheres of knowledge

The University of Delhi is the premier University of the country and is known for its high standards in research. Its strong commitment to excellence in research has made the University of Delhi a role-model and path-setter for other Universities in the country. It has been ranked as No. 1 University in the country in terms of research publications during the last ten years. There has been 20% increase in number of publications from the University from 1996 to 2006 and the number of publications has increased several folds since. There has also been a 33% increase in the H-index. The H-index for University of Delhi is now at 91, the highest amongst all Indian Universities. More than 5500 publications have been reported in refereed journals in last five years ranging in impact factor from 0-45.

The University has more than 170 Departments, Colleges and Centers that are in constant pursuit of achieving research excellence.

The University is committed to strengthen important areas of research and have still higher quality of research output. For this, the University has taken many initiatives to encourage, develop and further Departmental and college level research culture.

EXTRAMURAL FUNDING

Research Projects 2014-15

158 MAJOR PROJECTS WITH A TOTAL FUNDING OF RS 105.97 CRORES

105 MINOR RESEARCH PROJECTS WITH A TOTAL FUNDING OF RS 33.77 CRORES

International and National Bodies Funding Research Projects of University of Delhi

DBT, DST, IFICAR, UGC, MOEF, IAEA, ICAR, DRDO, CSIR, MOES, ICMR, MNRE, World Bank, TERI, Indo-USSTF, GAIL, IUAC, ICSSR, USA, MCIT, NUST, Univ. of Norway, Univ. of Turkey, ISRO, SDTT, Vigyan Prasar, SERB-DST, Japan Foundation, SEWA-THDC, MOSJ&E, DAE, MWCD, INSA, TISS-DU, Leverhulme Trust UK, ICHR,

DU-DST PURSE GRANT

The University of Delhi has been sanctioned Rupees 40.8 Crores as DST PURSE Grant. This is the highest amount from amongst 14 selected recipients of the grant for research in the university sector. The grant is a recognition based on significant increase in total number of publications and improved performance in publications with H-index values has risen to 91.

Based on the position of the University as No. 1 University in the country in terms of research publications during the last ten years, excellence in science and increase in H-index beyond 33% in past years, DST released the highest grant to the University of Rs 30 crores in the first round which was completed in 2013. The University has shown increased zeal and dedication in its research work while maintaining the consistent No.1 position in research publications in the country.

RESEARCH AND DEVELOPMENT GRANT

The Research and Development (R & D) Programme has been instituted by the University of Delhi to strengthen the research programmes of the Departments. R & D funding has immensely empowered the teachers desirous of continuous engagement in research. This has created a vibrant atmosphere of research in the University. The faculties of the science departments are given up to Rs 3.0 lakhs and those of non-science departments up to Rs 1.5 lakhs based on research projects submitted by them.

The details of the research projects supported in the past few years are as below:

S.No	Year	Research Projects supported	Total grant given by the University
1.	2009-11	265	Rs 10.0 Crore
2.	2011-12	338	Rs 6.0 Crore
3.	2012-13	355	Rs 6.5 crore
4.	2013-14	324	Rs. 7.0 crore
5.	2014-15	337	Rs 6.8 crore

SEED GRANT TO NEW FACULTY

The University of Delhi offers a seed grant to each new faculty member recruited in the University to initiate their research. This encourages and helps the faculty members to develop basic infrastructure and laboratory support along with encouragement to apply for major research grants from external funding agencies. The faculty members from science Departments are given Rs. 4.0 lakhs and those from non-science Departments are given Rs 1.5 lakhs.

RESEARCH PROJECTS WITH SANCTIONED GRANT OF MORE THAN RUPEES ONE CRORE

The following researchers received the grant above Rupees one crore from 2010-2014:

S.No.	Name of the PI	Department	Amount Rs (in crores)
1.	Prof. Anil Tyagi	Biochemistry	4.84
2.	Prof. R.C.Kuhad	Microbiology	14.84
3.	Prof. Rup Lal	Zoology	1.67
4.	Dr. Md. Naimuddin	Physics & Astrophysics	1.61
5.	Dr. B.C. Choudhry	Physics & Astrophysics	2.0
6.	Dr. Sunil Kr. Sharma	Chemistry	1.42
7.	Prof. A.K. Bhatnagar	Botany	4.50
8.	Prof. Rina Chakrabarti	Zoology	1.24
9.	Dr. Sihbnath Mazumdar	Zoology	2.98
10.	Prof. V.K. Chaudhary	Biochemistry	2.94
11.	Prof. A.K. Pradhan	Genetics	8.0
12.	Prof. J.P. Khurana	Plant Molecular Biology	7.51
13.	Prof. J.P. Khurana	Plant Molecular Biology	1.52
14.	Prof. V.K. Chaudhary	Biochemistry	1.82
15.	Dr. Arun K. Sharma	Plant Molecular Biology	1.89
16.	Prof. R.K. Shivpuri	Physics & Astrophysics	3.60
17.	Dr. Suman Kundu & 7 others	Biochemistry	2.52
18.	Prof. B.K.Thelma	Genetics	2.14
19.	Prof. J.P.Khurana	Plant Molecular Biology	1.08
20.	Prof. V.K.Chaudhry	Biochemistry	1.76
21.	Dr. Saurabh Raghuvanshi	Plant Molecular Biology	1.36

22.	Dr. Sanjay Kapoor	Plant Molecular Biology	1.28
23.	Prof. Vinod Kumar	Zoology	1.0
24.	Prof. Vinay Gupta	Physics & Astrophysics	1.03
25.	Prof. Kirti Ranjan	Physics & Astrophysics	2.50
26.	Prof. B.K. Thelma	Genetics	1.28
27.	Prof. P.C. Pattnaik	Modern Indian Language & Literacy	1.12
28.	Prof. R.C. Kuhad	Microbiology	1.12
29.	Dr. Jyoti Sharma	CIC	1.59
30.	Prof. J.P. Khurana	Plant Molecular Biology	1.69

The following researchers received grant above Rupees one crore in 2015

- Dr. Arun Jagannath, Department of Botany, 1.8 crore from DBT
- Prof. R P Tandon, Department of Physics & Astrophysics, 4.3 crore from MCIT.
- Prof. Rina Chakrabarti, Department of Zoology, 2.77 crore from NUST.
- Prof. Vinay Gupta, Department of Physics & Astrophysics, 4.23 crore from MCIT and 3.28 crore from DST
- Prof. Feroz Ahmed, Department of Physics 1.09 crore from World Bank
- Dr. Kirti Ranjan, Department of Physics & Astrophysics, 1.28 crore from SERB, DST.

UGC GRANTS

The University Grants Commission has conveyed its approval of the tentative allocation of Rs. 300.00 crore (Rupees Three Hundred crores) to the University of Delhi for the XII Plan period (2012-17) including Merged Scheme and Non-NET Fellowship for M.Phil./Ph.D. scholars.

UGC has further conveyed the tentative XII Plan allocation for the Colleges at Rs. 124 crores including Merged Schemes and provision of salary for 59 PG seats sanctioned during XI Plan, and approval of teaching posts for XII Plan period.

UGC has also conveyed its approval regarding the release Rs. 66.00 lakhs for grants-in-aid to University of Delhi for 2013-2014 under General Development Grant for Meta University Concept for Central Universities.

With respect to academic departments, the University Grants Commission has conveyed its approval to the following:

- Department of Social Work under Special Assistance Programme (SAP) for continuation from DSA-Phase-III to CAS-Phase-I for a period of 5 years (01/04/2013 to 31/03/2018).
- Department of East Asian Studies, extension of term of Centre for Area Study programme for a further period of 5 years (01/04/2014 to 31/03/2019) and sanction of Rs. 60 lakhs as financial assistance.
- Department of Persian, Upgradation/continuation from DRS-Phase-I to DRS Phase-II programme for a period of 5 years (01/04/2013 to 31/03/2018) and sanction of grant amounting to Rs. 44 lakhs, plus One Project Fellow for this purpose under the Special Assistance Programme.
- Department of Germanic and Romance Studies, Upgradation/continuation from DRS-Phase-I to DRS Phase-II programme for a period of 5 years (01/04/2013 to 31/03/2018)

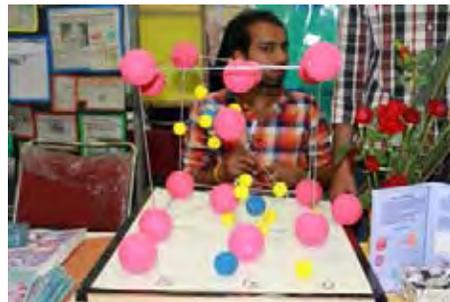
and sanction of grant of Rs. 59.50 lakhs for this purpose under the Special Assistance Programme.

DEPARTMENTS WITH UGC SPECIAL ASSISTANCE PROGRAMME GRANT

- | | |
|------------------------------------|---------------------------------|
| 1. Anthropology | 10. Mathematics |
| 2. Botany | 11. Music |
| 3. Economics | 12. Persian |
| 4. Genetics | 13. Physics And
Astrophysics |
| 5. Geography | 14. Plant Molecular Biology |
| 6. Geology | 15. Political Science |
| 7. Germanic And
Romance Studies | 16. Social Work |
| 8. Hindi | 17. Sociology |
| 9. Linguistics | 18. Zoology |

DEPARTMENTS WITH ASP GRANT FROM UGC

1. African Studies
2. Centre For Canadian Studies
3. East Asian Studies
4. Developing Countries Research Centre



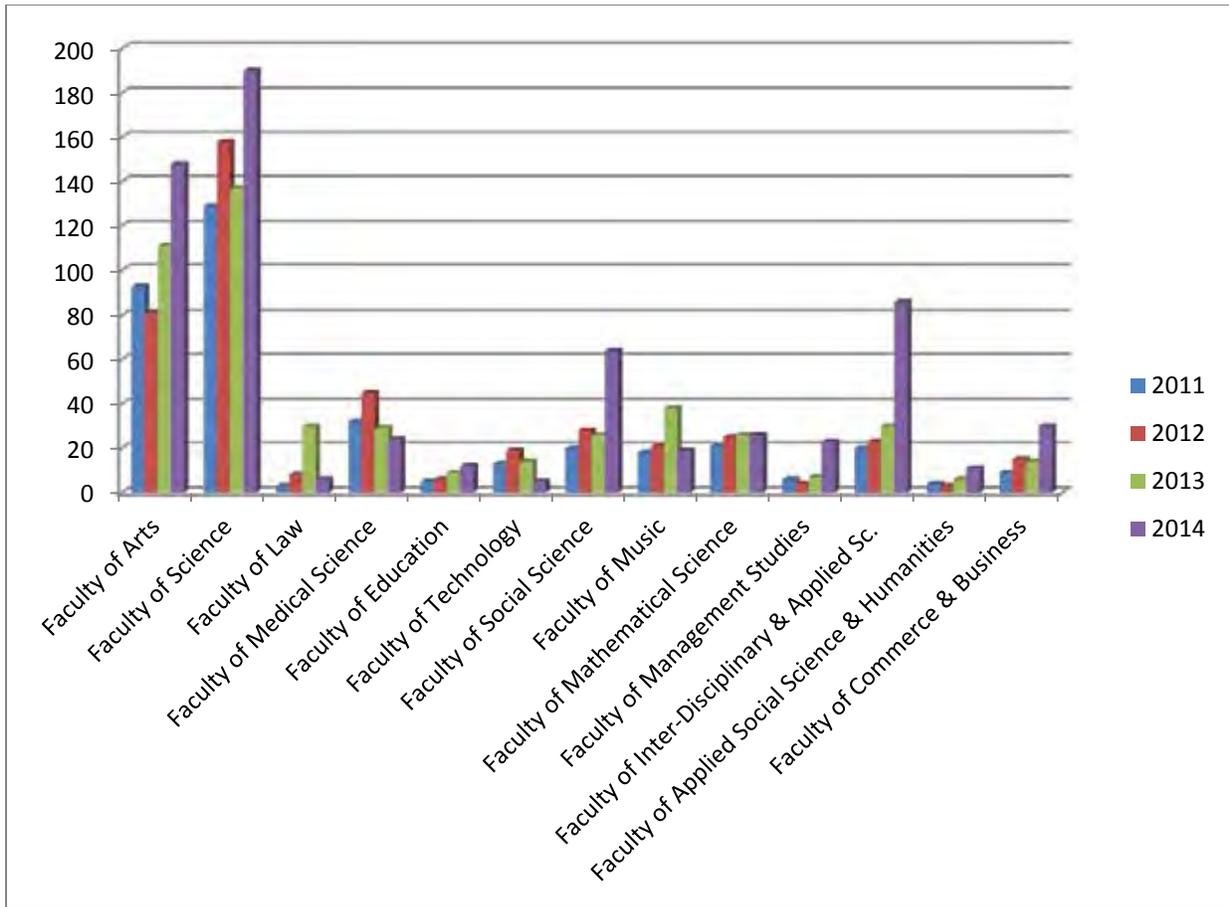
SPONSORED RESEARCH AND DEVELOPMENT SCIENCE PROJECTS DURING THE LAST FIVE YEARS

Name of the Department/ Centre	No. Sponsored R&D Projects	Amount (Rs in lakh)
Dr. B.R. Ambedkar Centre For Biomedical Research	36	975.61
Anthropology	63	
Biochemistry	38	3117.45
Biophysics	10	90
Botany	37	554.99
Chemistry	94	1445
Computer Science	6	23.28
Electronic Science	24	300
Environmental Studies	30	550
Genetics	61	5,337
Geology	50	732.74
Microbiology	76	2310
Operational Research	30	31.97
Plant Molecular Biology	51	2852
Physics & Astrophysics	77	1022.44
Zoology	85	3500
Mathematics	15	

DOCTOR OF PHILOSOPHY DEGREES IN DIFFERENT FACULTIES

S.No.	Faculty	2011	2012	2013	2014
1	Faculty Of Arts	93	81	111	148
2	Faculty Of Science	129	158	137	190
3	Faculty Of Law	3	8	30	06
4	Faculty Of Medical Science	32	45	29	24
5	Faculty Of Education	5	6	9	12
6	Faculty Of Technology	13	19	14	05
7	Faculty Of Social Science	20	28	26	64
8	Faculty Of Music	18	21	38	19
9	Faculty Of Mathematical Science	21	25	26	26
10	Faculty Of Management Studies	6	4	7	23
11	Faculty Of Inter-Disciplinary & Appl. Sc.	20	23	30	86
12	Faculty Of Applied So. Sc. & Hum.	4	3	6	11
13	Faculty Of Commerce & Business	9	15	14	30





REPRESENTATION OF PH.D. DEGREES FACULTYWISE



INFORMATION REGARDING PATENTS GRANTED AND FILED

Delhi University Patent Applications Filed During Last Five Years (Jan. 2010 To July 2015)			
INDIAN	FOREIGN	PCT	TOTAL
24	04	04	32

Delhi University Patents Granted During Last Five Years (Jan. 2010 To July 2015)		
INDIAN	FOREIGN	TOTAL
09	13	22

Patents Granted

Title Of Invention	Inventor	Country
Improved Process For Expression, Purification And Enhanced Recovery Of Mycobacterial Recombinant Proteins	Chaudhary, Vijay Kumar; Gupta, Amita ; Tyagi, Anil; Kumar ; Kulshrestha, Abhishek;	India
Mutants Of Mycobacteria And Process Thereof <u>Co-Applicant :</u> Indian Council Of Medical Research, New Delhi	Tyagi, Ak; Singh, Ramandeep ; Rao, Vivek Ramanathan; Vadakkuppattu Devasenapathi ; Paramasivan, Chinnambedy Nainarappan; Narayanan, Paranji Ramaiyenger ; Singh, Yogendra	India
		USA

<p>Novel Gene Osisap1 Of Rice Confers Tolerance To Stresses And A Method Thereof</p> <p><u>Co-Applicant</u> : Department Of Biotechnology, New Delhi</p>	<p>Tyagi, Kumar Akhilesh; Arnab, Mukhopadyay ; Vj, Shubha</p>	<p>Japan</p>
<p>Withania Somenifera Plant Extract And A Method Of Prepration Thereof</p> <p><u>Co-Applicant</u> : Indian Inst Science, Bangalore & National Brain Research Centre, New Delhi</p>	<p>V. Ravindranath, Alok Gupta, Neha Sehgal, S.C.Jain, P.Balaram</p>	<p>USA</p>
		<p>China</p>
<p>A Process For Producing Modified Reconstituted Sendai Viral Envelope Specific For Drug And Or Gene Delivery To Liver Cells</p> <p><u>Co-Assignee</u>: National Research Development Corporation, N. Delhi, India</p>	<p>Santosh K. Verma; Prashant Mani ; Nishi Raj Sharma; Anuja Krishnan; Valluripalvinod Kumar; Bathula Surendar Reddy ; Arabinda Chaudhuri; Rajendra P. Roy ;Debi P.Sarkar;</p>	<p>Europe</p>
<p>Regulation Of Lethal Gene Expression In Plants</p> <p><u>Co-Applicant</u> : National Dairy Development Board,Gujrat,In</p>	<p>Pental, Deepak ; Jagannath, Arun ; Bandyopadhyay, Panchali ;Arumugam, Neelakantan ; Gupta, Vibha ; Burma, Pradeep Kumar;</p>	<p>Canada</p>
<p>A Novel Cytoplasmic Male Sterility System For Brassica Species And Its Use For Hybrid Seed Production In Indian Oilseed Mustard Brassica Juncea.</p> <p><u>Co-Applicant</u> : Dhara Vegetable Oil And Foods Company Ltd, Gujarat</p>	<p>Sodhi, Yashpal Singh ; Pradhan, Akshay Kumar ; Gupta, Vibha ; Arumugam, Neelakantan ; Verma, Jagdish Kumar ; Mukhopadhyay, Arundhati ; Pental, Deepak</p>	<p>India</p>
		<p>USA</p>
		<p>Australia</p>
<p>Process For The Isolation And Purification Of Higher Yield Of Protein P17 Of Hiv-1(Subtype C)(A Non Living Protein</p>	<p>Chaudhary Vijay Kumar, Gupta Amita, Arora Kajal, Gupta Sanjay</p>	<p>India</p>
<p>An Insulator Construct For Controlling Leaky Expression Of A Lethal Gene.</p> <p><u>Co-Applicant</u>: Dhara Vegetable Oil And Foods Company Limited, Gujarat</p>	<p>Arun Jagannath, Panchali Bandyopadhyay, Neelkantan Arumugam, Vibha Gupta, Pradeep Kumar Burma, Deepak Pental</p>	<p>India</p>

<p>Novel Yeast Strains Having Accession Nos. Drf-Uds 004/Wf, Drf-Uds 016/Wf, And Drf-Uds 017/Wf And A Method For Propagation</p> <p><u>Co-Applicant</u> : Dabur Research Foundation, Ghaziabad.</p>	<p>N.B. Brindavanam Y.Venkateshwara Rao ;D.B.A. Narayana ; T.Satyanarayan; Ashima Vohra ; Sanjeev Kumar</p>	<p>India</p>
<p>Method For Obtaining Improved Fertility Restorer Lines For Transgenic Male Sterile Crop Plants And A Dna Construct For Use In Said Method</p> <p><u>Co-Applicant</u> : Dhara Vegetable Oiland Foods Company Limited, Gujarat</p>	<p>Bisht, Naveen Chandra Jagannath, Arun Gupta, Vibha Burma, Pradeep Kumar, Pental, Deepak</p>	<p>USA</p>
<p>Rtbv Plant Promoter And Process Thereof</p> <p><u>Co-Applicant</u> : Department Of Biotechnology, New Delhi</p>	<p>Dasgupta, Indranil; Mathur, Saloni</p>	<p>India</p>
		<p>Eurasia</p>
<p>A Pcr- Baced Kit For Detecting Chlamydia Atrchomatis And Nelsseria Gonorrhoeae</p> <p><u>Co-Applicant</u> : Department Of Biotechnology, (In)</p>	<p>Daman Saluja; Uma Chaudhary ; Mashook Ali; Poonam; Achchhe Lal Patel</p>	<p>Japan</p>
<p>Rtbv Plant Promoter And Process Thereof</p> <p><u>Co-Applicant</u> : Department Of Biotechnology, New Delhi</p>	<p>Dasgupta, Indranil; Mathur, Saloni</p>	<p>India</p>
<p>A Process For The Synthesis Of Bisbenzimidazoles And Their Derivatives.</p>	<p>Jain, Akash; Tawar, Urmila; Chandra, Ramesh, ; Dwarakanath, B.S.;Chaudhury, N. K.; Tandon, Vibha.</p>	<p>USA</p>
		<p>India</p>
<p>A Process For The Synthesis Of Bisbenzimidazoles And Their Derivatives.</p>	<p>Jain, Akash; Tawar, Urmila; Chandra, Ramesh, ; Dwarakanath, B.S.;Chaudhury, N. K.; Tandon, Vibha.</p>	<p>Europe</p>
		<p>India</p>

Curcumin Analogs And Methods Of Making Using Thereof <u>Co-Applicant</u> :- Georgia State University Research Foundation, Inc., (Us)	Diwan S. Rawat, Binghe Wang, Nitin Kumar, Sunny Manohar (In) Xiaochuan Yang, Guojing Sun, Nanting Ni (Us) Rawat, Binghe Wang, Nitin Kumar, Sunny Manohar (In) Xiaochuan Yang, Guojing Sun, Nanting Ni (Us)	Usa
		PCT
A Novel Beacon-Based Diagnostic Probe/Tool/Kit For Detection Of Translocation 8;21 In Acute Myeloid Leukemia Patients And Method Of Working For The Same <u>Co-Applicant</u> : Department Of Biotechnology	Daman Saluja; Rashi Arora; Sunita Jetly	India
A New Fluorescent Beacon Probe Diagnostic Tool/Kit For Molecular Detection Of Translocation T(9;22)/Bcr-Abl1 In Leukemic Patients And Method Of Working For The Same <u>Co-Applicant</u> : Department Of Biotechnology	Daman Saluja; Rashi Arora; Sunita Jetly	India
A Bio-Conversion Method To Improve Nutritional Properties Of Lignocellulosic Residues <u>Co-Applicant</u> : Department Of Biotechnology & Ayurvet Limited	Kuhad, Ramesh Chander; Shrivastava, Bhuvnesh; Kalra, Anup	India
A Synergistic Herbal Composition For Prevention And Treatment Of Diabetic Retinopathy And Cataract <u>Co-Applicant</u> : Promed Research Centre , Gurgaon Delhi Institute Of Pharmaceutical Sciences & Research; University Of Delhi	Bahri, Deepak; Gaur, Shrikant; Gupta, Suresh, Kumar; Srinivasan, Bhartur, Parthasarathy; Gupta, Ram, Kumar; Aggarwal, Ashutosh; Kumar, Binit; Srivastava, Sushma; Saxena, Rohit;	India
		PCT
		Eurasia
Pcr-Based Detection Method For Chlamydia Trachomatis <u>Co-Applicant</u> : Department Of Biotechnology, N Delhi	Saluja, Daman ; Chaudhury, Uma ; Ali, Mashook ; Sachdeva, Poonam; Patel, Achche Lal	USA
Polynucleotides Encoding Heat Shock Transcription Factor And Uses Thereof	Khurana, Paramjit Chauhan, Harsh ; Khurana, Jitendra Paul;	India
N-Protected Isatin Compounds <u>Co-Applicant</u> : Council Of Scientific & Research	Balaram Ghosh; Parmar, Virinder Singh; Ashok Kumar Prasad ; Gainda Lal Sharma; Sakshi Balwani; Shashwath Malhotra ; Seema Singh	India

Abiotic And Heavy Metal Stress-Inducible Blec-Str8 Promoter From Rice <u>Co-Applicant</u> : Department Of Biotechnology	Tyagi, Akhilesh Kumar; Kapoor, Sanjay; Ray, Swatishmita .	India
Abiotic And Heavy Metal Stress-Inducible Nbs-Str1 Promoter From Rice <u>Co-Applicant</u> : Department Of Biotechnology	Tyagi, Akhilesh Kumar ; Kapoor, Sanjay ;Ray, Swatishmita	India
A Process For Production Of Fermentable Sugars From Lignocellulosic Substrate	Ramesh Chander Kuhad, Rishi Gupta	India
Tissue Specific Promoter And Uses Thereof <u>Co-Applicant</u> : Department Of Biotechnology, New Delhi	Kapoor, Sanjay , Tyagi, Akhilesh Kumar, Deveshwar, Priyanka	India
Coumarin Compounds For The Treatment Of Mycobacterial Infections <u>Co-Applicant</u> : V P Chest Institute, Delhi	Virinder Singh Parmar; Ashok Kumar Prasad; Hanumantharao Guru Raj; Mridula Bose ; Sunil Kumar Sharma; Rashmi Tandon; Anil Baghel; Abha Kathuria; Garima Gupta; Neha Aggarwal	India
Spiro-(Indoline-Isoxazolidines) Compounds Having Inhibitory Effects On Cytokine-Induced Cell Adhesion Molecule Icam-1 Expression Onto Human Endothelial Cells. <u>Co-Applicant</u> : Council Of Scientific And Industrial Res.	Balaram Ghosh; Virinder Singh Parmar ; Ashok Kumar Prasad; Brajendra Kumar Singh; Sakshi Balwani; Shashwat Malhotra	India
Optimized Process For Production Of Alkaline Lipase Enzyme From Pseudomonas Sp. And Its Applications Thereof	R.K. Saxena; Gautam Kumar Meghwanshi	India
Regioselective Acylation Of Nucleosides <u>Co-Applicant</u> : Department Of Biotechnology, New Delhi	Parmar, Virinder Singh; Prasad, Ashok Kumar ; Saxena, Rajendra Kumar ;Shakya, Gaurav;	PCT India
Thionated Cinnamates And Process For Preparation Thereof <u>Co-Applicant</u> : Council Of Scientific And Industrial Research	Balaram Ghosh; Virinder Singh Parmar; Ashok Kumar Prasad ;Brajendra Kumarsingh; Sarvesh Kumar	India
A Pcr- Baced Kit For Detecting Chlamydia Atrchomatis And Nelsseria Gonorrhoeae <u>Co-Applicant</u> : Department Of Biotechnology, (In)	Daman Saluja; Uma Chaudhary ; Mashook Ali; Poonam; Achchhe Lal Patel	USA

UNDERGRADUATE RESEARCH INITIATIVE

INNOVATION PROJECTS

The scheme of Innovation Projects, a highly successful venture of University of Delhi is a unique scheme of promoting undergraduate research in colleges and inculcating innovative thinking in students.

The Concept The Innovation Projects were conceptualized by the Vice Chancellor against the background of opportunities and limitations reported in undergraduate colleges of the University of Delhi. While teachers often said they wished for research opportunity, the students were often seeking interdisciplinary exposure. Given a curriculum which was bounded by a discipline based syllabus and strict timetables for lectures, the teachers and students did not have the time, or the grants, to consider new ways of learning.

The scheme, 'Innovation Projects in Colleges' invited proposals in January 2012 that were 'designed to enhance learning experience through student participation'. They are conducted by teams of at least three teachers and ten students from at least two departments and a Mentor from outside the institution. The scheme was structured to encourage and support hands-on research by college teachers and students. The highlight of the projects is the interdisciplinary nature of projects with real world exposure and societal impact.

Entries and Grants The response from students and teachers was very enthusiastic. The response to the second round (2013-14) was very encouraging. 404 applications were received from 62 colleges. The University selected 251 projects out of which 124 were from Science streams and 127 from Humanities and Social Science streams, though most of them have strong interdisciplinary favour. The half-yearly reports of the projects have been really encouraging and show the enthusiasm with which the students and the college faculty have received this initiative of promoting and furthering innovative ideas at the undergraduate level.

The programme's maturity not only remains informative but paves the way for further work. Through extensive feedback it would appear that the following are the principal gains of the scheme:

- Innovative ideas with a firm hypothesis
- Enquiring mind and hardworking temperament
- Interdisciplinary research across at least two subject areas.
- Attempt to resolve real-life problems in environment, waste management etc.

- Training in field work, questionnaires, interview techniques
- Data search, understanding and analysis
- Communication and Report writing skills
- Link between academia and industry
- Confidence to sign up for patents
- Directions for high-end further research at postgraduate level
- Valuable interaction between students and teacher-mentors
- Skills of project management.

The response shows that the innovative ideas are worth pursuing, and the joy of establishing new concepts and outcomes is unparalleled. The University of Delhi is highly rated for research. This round of Innovation Projects has shown that the ideas can have early inceptions and remarkable fruition at the college level through highly qualified faculty and bright, motivated students.

Innovation Plaza

The Innovation Projects were showcased in 2013-14 and 2014-15 in an academic exhibition called Innovation Plaza at the time of Antardhvani, the academic festival. It has been a hugely successful display attracting thousands of visitors.

Success stories, reports, achievements and attention in media

112 research publications, nine books and six patents have been reported from this round along with several interesting findings that are being further researched upon.

The progress has been monitored carefully. Several projects had demonstrated the viability of the innovations. It is clear that the purpose for which the Innovation Project scheme had been launched, which was to generate excitement in trying out ideas and carrying them through by means of practical output, was being fulfilled. The outcome of the projects may build prototypes for problem-solving in the community. In the first round, 14 projects have received media attention, and 4 have filed patents. Most projects conducted field trips, seminars and workshops. The hands-on approach showed results in public and drew attention to real life problems of shelter, water & air pollution, urban transport, nutrition, preservation of history and culture, weekly markets and such others. Newspapers have periodically carried reports and four books has been published. The second round has generated even more excitement. Several publications have been reported. Several eco-friendly initiatives are being tested for practical applications. Several projects are considering filing of patents. Several mobile Applications are being launched like Spinal injuries, monitoring level of pollution etc. Several studies are showing possibilities of long-term societal impact. A hand-made

paper unit has been set up. The final outcomes have shown several promising innovations and achievements.

Awards for Innovation Projects

This year the Innovation projects were displayed at Antardhvani 2015 and they were categorized into eight broad themes- Digital World, Scientific Arena, Cultural Diversity, Economic Development, Business Ideas, Environmental Issues, Social Welfare and Health Concerns. Forty-two awards were given as Appreciation for Best Displays (five in each category). 26 projects were chosen for a University Industry interface and were awarded Appreciation Certificates for Best Innovative Ideas.

AWARDS FOR BEST DISPLAY- INNOVATION PROJECTS AT ANTARDHVANI 2015, THEMEWISE

ECONOMIC DEVELOPMENT

Medical tourism – a game changer for Indian tourism economy
Evaluating the socio-economic changes and its political consequences in the Kashmir
Understanding the desertification and related socio-economic scenario of national capital region of Delhi
Real Time Traffic Solution
Traditional knowledge and sustainable livelihood pattern in Pratap Nagar block, Tehri Garhwal, Uttarakhand

SOCIAL WELFARE

Azmat
Place and crime in cities of India: a study for crime prevention through city planning
Socio-political and psychological causes of road traffic jam problems, their environmental and societal impacts and suggesting remedial measures for smoothing road traffic in Delhi-NCR
Fostering diffusion of educational technologies in undergraduate learning for the students, by the students
Identification of Weapon Holders in Crime Cases

BUSINESS IDEAS

Designing solar engineered products for rural population
To prepare edible packaged, low cost health snack from fruit and vegetable waste and study its effect in healthy respondents
Green Diesel- A sustainable alternative fuel for the future
Development of Innovative Eco-Friendly Biodegradable Polymer Composites (substitute for plastics and filters)
Designing and optimization of auto-tracking solar energy based energy conversion module for rechargeable appliances

DIGITAL WORLD

Development of a user friendly android based mobile app for providing awareness and information on spinal cord insult and injuries
Mathematical modeling and simulation of neural network based controllers of Robots
Impact of cloud computing on the Indian economy and its derivatives
Development of university applications (du-apps) for mobile platforms
Development of e-device application for students and behavior analysis

SCIENTIFIC ARENA

Characterization of corrosion resistance properties of hydroxyl based compounds in mine water environment from Indian mines coal and empirical calculations of thermodynamic parameters
Development of low cost computer controlled science laboratory using sensors and open source hardware and software tools
Genetic curation of ataxia phenomes for establishment of predictive and rapid diagnostic paradigm
Use of photo galvanic cell for solar energy conversion and storage in electrical energy

Drug Design through molecular modeling studies for selected drug targets in Plasmodium falciparum to combat drug resistance against malaria

Efficacy of natural dyes in dyeing and imparting antimicrobial properties to different textile materials

Immuno-histochemical evaluation of candidate makers for sebaceous differentiation and their association with aggressive eyelid sebaceous gland carcinoma

HEALTH CONCERNS

Nutrition and psychosocial well-being of rural elderly population of Delhi

Nutrition awareness and food choices among students in Delhi schools : gaps and barriers in practicing healthy food behavior

Effect of heavy metal and trace elements in water on human health status in Delhi-NCR region

Public awareness and evaluation of probiotics sold in Delhi

The experience and correlates of happiness among young adults

CULTURAL DIVERSITY

Comprehension of ethnic practices of selected Indian tribes as pro-ecological customs and their deviation from the stream

Consciousness as reflected in Vedanta & modern sciences

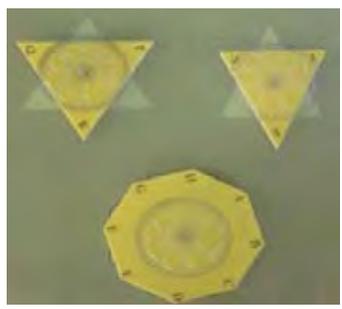
Kashmiriyat beyond- a study of colonial and postcolonial Kashmir

Terra Incognita: Exploring, Mapping and Documenting Socio-Economic and Cultural Characteristics of Western Himalayan Borderland Areas of India

हिंदी भाषा का आधुनिकीकरण

ENVIRONMENTAL ISSUES

Potential of organic farming in combating salt stress and its socio-economic aspects
Biochemical assessment of toxic heavy metals in bacterial strain growing in the polluted water: A step towards Bioremediation
Exploring the use of Biocatalysis in laboratory chemical reactions: A Green Chemistry Approach
Environmental impact assessment of Gazipur land fill area
Agriculture management: prospects and challenges (a study of farmers perceptions towards agriculture management)



UNIVERSITY-INDUSTRY INTERACTION OF INNOVATION PROJECTS AWARD FOR BEST INNOVATIVE IDEA

The researchers of the Best Ideas among the Innovation Projects showing promising outcomes with the potential of industrial application interacted with the best of industrial leaders and presented their ideas before them. The benefits of such interactions were enormous with great motivation for the participating projects. Some of the projects that were selected for industry interaction are as below:

Development of low cost computer controlled science laboratory using sensors and open source hardware and software tools.

Artificial olfaction using E-Nose – mimicking human nose for gas sensing applications
Agro-Waste Material Management: From Waste to Wealth
Integrating tour enterprises with NGOs in Delhi NCR and beyond
A Study of Crop Yield pattern with Climate Change based on various Physical Parameters like Temperature, Rainfall, Humidity, Greenhouse Gases Emission, etc. in Western Uttar Pradesh to make future predictions for better Crop Management and Yield
How Safe are Our Detergents: A Comparative Study and Development of Bio-Detergents
A Mobile App for Personalized Student Information
Medical Tourism - a game changer for Indian Tourism Economy
Enabling technologies for pine needles from disastrous waste(forest fire) to multitude of application: energy , capacity building, employment & environmental benefits for Himalayan region
Development of an Eco-Friendly, Efficient, Portable Lighting Source Utilizing a Renewable Energy Source and a Solid State Lighting Solution Solar Led Bulb
Designing and Optimization of Auto-Tracking Solar Energy based Energy Conversion Module for Rechargeable Appliances
Development of a Zero Discharge, Eco Friendly, Affordable and Carbon Neutral Biofuel Using In-House Horticulture Waste
Affordable solutions for Water Conservation
To evaluate the feasibility of installing wind turbines in Metros
Reinventing the Brand Positioning of Indian Tourism in Global Market
Creating Social Acceptance Towards Sustainability Audit of Electronic Products In Planning Modern India
Fostering Diffusion of Educational Technologies in Undergraduate Learning for the Students, by the Student
Efficacy Of Natural Dyes In Dyeing And Imparting Antimicrobial Properties to Different Textile Materials

Connecting Digital World to The Physical World Through Social Media Project Code

Green Diesel- A Sustainable Alternative Fuel for The Future

A Novel Multipurpose Composition for Detecting Fingerprints on Crime Scene Evidence

Water Harvesting Techniques For Development in Nagaur District, Rajasthan

Real Time Traffic Solution

Azmat

Sustainability As An Innovative Business Strategy

Health insurance scheme for domestic workers: Public private partnership

Development of a user friendly android based mobile app for providing awareness and information on spinal cord insult and injuries



THE DELHI UNIVERSITY JOURNAL OF UNDERGRADUATE RESEARCH AND INNOVATION

The Delhi University Journal of Undergraduate Research and Innovation, an initiative of University of Delhi and the first of its kind for reporting quality research at the undergraduate level in India, has become a landmark for universities in India and abroad. It has been instrumental in encouraging young minds to develop creative as well as analytical thinking abilities and inculcating a research culture at the undergraduate level. The skill to write a good research paper is an art. Working on a research problem, conducting field and laboratory studies outside the classroom setting, analyzing the research results, creating a meaningful outcome of it and weaving it into a beautiful story is genesis of knowledge. This creates an apt background for honing the intellectual abilities of the young minds whose experimenting and exploratory power is boundless and unfathomable. Traversing seamless boundaries are visionary initiatives endowing the University of Delhi that have revolutionized undergraduate research like Innovation Projects, Gyanodaya projects, extramural research projects in colleges etc. The Journal provides an apt platform for reporting significant findings in the above initiatives, as also various innovative outcomes that have the potential of transforming the society and bringing about radical change. The journal is a culmination of the vision of the Hon'ble Vice Chancellor and the team that has given a new direction and meaning to our thinking, creating, analyzing and reporting.

The first issue has 22 Science articles while the second issue has 26 Humanities and Social Sciences articles. The third issue has 22 interdisciplinary articles. Details are available at <http://journals.du.ac.in/ugresearch/>



Two more e-Journals- The DU Journal of Humanities and Social Sciences and The DU Journal of Creative Writing run successfully from DU portal.

INNOVATION CLUB

The Innovation Projects and their activities have also been considered for reporting under the Innovation Club monthly reports to be sent to MHRD. The displays at Antardhvani, any innovations shown by Innovation Projects and the activities reported with University-Industry Interaction have formed part of the Innovation Club.

The activities of the Innovation are as below:

1. All students and teachers participating in the Innovation Projects and those of the Cluster Innovation Centre already become members of the Club. In addition, any one from the University who wishes to be a part of it may join.
2. A web page is to be created for reporting the activities of the Club and for inviting any proposals.
3. Occasional talks from industry and academia be organized for motivating towards critical thinking
4. A network with the industry representatives be formed so that any idea that needs to be developed further can be directed for suggestions towards the right industry leader.
5. The Management Committee members conduct and manage weekly/monthly activities for members.
6. Short-term courses in writing business proposals and entrepreneurship be organized.
7. Any one with an innovative idea will write to the Club members and he may be called by the Committee to make a presentation on his idea. Suggestions for promoting this further may be given. This may be made a monthly affair.

INCUBATION CENTRES

Incubation Centres are being set up in the University of Delhi with a futuristic vision that the skills developed by the students while studying and the new ideas that they come up with during the process can be practically incubated into a startup. With this vision, the following steps have been taken:

- MoU signed with Software Technology Parks of India (STPI) & Indian Electronics and Semiconductor Association (IESA).
- First-of-its-kind Electropreneur Park established in South Campus to support Electronic System Design and Manufacturing (ESDM):
 - i. STPI would provide funding and management of Incubation Centres
 - ii. University would provide infrastructure, knowledge experts and incubates

- iii. IESA is the implementing agency of the project along with Cyber Media(India) Online Ltd. (CIOL) and shall provide industry connect, technical know-how, promotion and outreach, in addition to venture capital access for the incubetees.
- iv. The objective is to setup 50 enterprises in next 5 years.
- v. The Executive Council of the University has recently approved the merger of Technology Based Incubator with the Cluster Innovation Centre. This is expected to facilitate startups for the students of the University.

INSPIRED TEACHERS NETWORK

It is reiterated that the University of Delhi has a scheme called Innovation projects at the colleges of University of Delhi that promotes interdisciplinary research at the undergraduate level at the University of Delhi. All the faculty members (814 for the second round) of colleges who have actively participated in the scheme and have been promoting the culture of innovation amongst students at the undergraduate level along with creative thinking and analytical abilities have been considered to be a part of the Inspired Network and the activities under this scheme have been reported as part of the Inspired Teachers Network and Innovation Club. These include the meetings conducted with these teachers, displays at two Innovation Plazas, the showcase at Antardhvani, the Best Display awards, the presentation and interaction under the University-Industry Interface and the Awards for the Best Innovative Ideas. Hence, the Inspired Teachers Network has been operational from the Innovation Desk at the Research Council from the University of Delhi. In addition, the Cluster Innovation Centre (CIC) and its Innovation Projects have also been included in the scheme and their displays and outcomes have also been considered to be a part of this network. In addition to this, other faculty members of the CIC who have been working on various research projects and inculcating a culture of innovation amongst their students are also considered as a part of the Inspired Teachers Network.



GLOBAL RESEARCH INITIATIVES

MEMORANDUM OF UNDERSTANDING SIGNED WITH FOREIGN UNIVERSITIES

The University of Delhi signed MoUs in 2015 with the following Universities

1. San Diego State University, USA
2. Copenhagen Business School, Denmark
3. University of Glasgow, UK
4. Université Paul-Valéry Montpellier 3, France
5. Japan Advanced Institute of Science and Technology, Japan

The MoU signed by University of Delhi globally are as follows:

S.No.	Foreign Universities	Month/Year signed
1	Foundation of Castellano Y Leones Institute of Language, Burgos, Spain	February 2009
2	National Tsing Hua University, Taiwan	March 2009
3	Korea Research Institute of Bioscience and Biotechnology (KRIBB), Korea	April 2009
4	Konkuk University, Korea	May 2009
5	Universita Della Calabria	July 2009
6	Kangwon National University, Korea	September 2009
7	University of Zagreb, CROATIA	November 2009
8	Korea University, KOREA	November 2009
9	University of the Fraser Valley, CANADA	November 2009
10	Norwegian University of Science and Technology, Trondheim, Norway	November 2009
11	University of Calgary, Canada	February 2010
12	Hokkaido University, Japan	February 2010
13	Bielefeld University, Bielefeld, Germany	March 2010
14	Lund University, Sweden	March 2010

15	Korea National University of Arts, Seoul, Korea	April 2010
16	University of Wales, Newport, UK	April 2010
17	Fudan University, China	April 2010
18	The Georg-August-Universität Göttingen, Germany	April 2010
19	Alabama State University, USA	May 2010
20	University of Rhode Island, USA	June 2010
21	University of Melbourne, Australia	July 2010
22	International Award for Young People (IAYP), UK	July 2010
23	The National Board for Higher Education, Asmara, Eritrea	September 2010
24	University of Edinburgh, UK	October 2010
25	The University of Koblenz – Landau, Germany	October 2010
26	Trinity College, Dublin	November 2010
27	The University of Maryland, USA	December 2011
28	The Vietnam Academy of Social Sciences (VASS)	March 2012
29	The Vietnam Academy of Science and Technology	March 2012
30	The Vietnam National University Hochiminh (VNU HCM)	March 2012
31	The Vietnam National University Hanoi (VNU Hanoi)	March 2012
32	University College Dublin, National Univ. of Ireland, Dublin	April 2012
33	Osaka University, Japan (Graduate School of Science)	May 2012
34	National Dong Hwa University, Taiwan, R.O.C.	May 2012
35	Kazakh National Pedagogical University, Kazakhstan	August 2012
36	University Paris-Dauphine, Paris, France	September 2012

37	Massey University, New Zealand	October 2012
38	Lincoln University & Asia Pacific Football Academy, Lincoln, New Zealand	October 2012
39	University of Potsdam, Germany	2011 and 2012
40	University of Wuppertal, Germany	February 2013
41	The Ecole Normale Superieure (ENS), Paris, France	February 2013
42	Seoul National University, Korea	May 2013
43	CASE Western Reserve University, USA	July 2013
44	University of Birmingham, UK	July 2013
45	University of Aizu, Japan	October 2012-13
46	Ataturk University, Turkey	October 2013
47	Kadir Has University, Turkey	October 2013
48	Universite Libre de Bruxelles, Belgium	October 2013
49	Ghent University, Gent, Belgium	October 2013
50	Group T, International University of Engineering, Belgium	October 2013
51	University of Michigan	November 2013
52.	Epitech University	November 2013
53.	M.V. Lomonos ov Moscow State University	May 2015
54.	University of Oslo	February 2015
55.	Institut D' Etudes Politeques De Paris	February 2014
56.	Copenhagen Business School	April 2014
57.	University of Glasgow	May 2014
58.	University Paul Valery Montpellier 3	July 2014

59.	San Diego State University	April 2014
60	University of Moscow	2015

INTERNATIONAL RELATIONS EXCHANGE

Foreign Students' Registry

Year wise number of foreign students registered in the University of Delhi

Years	No. of Students
2009-2010	1356
2010-2011	1421
2011-2012	1270
2012-2013	1027
2013-2014	1030
2014-2015	1184

Incoming Exchange Students (Duration- One Semester to One year)

Under existing MoUs

Students of the following universities visited the University of Delhi under the existing Memorandum of Understanding. Thirteen students visited in 2009-10, Eleven students in 2010-11, Thirty seven in 2011-12, Seventeen in 2012-13 and Eleven in 2013-14

- University of Heidelberg, Germany
- University of Edinburgh, UK
- California University, USA
- Universite Jean Moulin, Lyon 3, France
- University of Hamburg, Germany
- University of Helsinki, Finland
- National Tsing Hua University, Taiwan
- University of Goettingen, Germany

- Norwegian University of Science and Technology, Norway
- University of British Columbia, Canada
- University of Hokkaido, Japan
- University of Asmara, Eritrea

Incoming Exchange students to the University of Delhi under the Existing MoUs for the academic session 2013 – 14

S.No.	Name of the Applicant	Home University	Course	Department/College	Duration
1.	Mr. Hans Georg R. Naesheim	Norwegian University of Science and Technology (NTNU)	Computer Science (B.Sc. Hons)	Shaheed Sukhdev College of Business Studies	One Academic Year
2.	Ms. Emma Djilali	UBC	Economics and Philosophy (BA)	Miranda House	One Semester July – Dec 2013
3.	Ms. Lara Mauch	Heidelberg University	Anthropology (B.Sc.)	Department of Anthropology	One Academic Year
4.	Ms. Carstens Mihaela	Hamburg University	History (MA)	Deptt of History	One Academic Year
5.	Ms. Annika Bergbauer	Goettingen University	Economics (MA)	Deptt of Economics	One Semester July – Dec 2013
6.	Mr. Christoph Greene Stripp	Goettingen University	Economics (MA)	Deptt of Economics	One Semester July – Dec 2013
7.	Ms. Durand Marion	Lyon 3, France	MA Italian	Deptt of GRS	One Academic Year
8.	Mr. Bosc Guillaume	Lyon3, France	History (MA Prev)	Deptt of History	One Academic Year
9.	Mr. Bega	Lyon 3, France	Commerce (B.Com IIIrd year)	SRCC	One Academic Year
10.	Ms. Samantha Jane Kenny	Univ. of Edinburgh	History (MA)	Department of History	One Academic year

Details of Activities involving Foreign Students and Faculty visiting the University of Delhi in the year 2014

1. The University of Delhi hosted U21 Intensive Masters Module titled “**Security and Development in South Asia**” in collaboration with the University of Melbourne, Australia during February 10 – 14, 2014. Fourteen Students from Melbourne and 13 students from

the Department of Political Science, University of Delhi participated in a week long module.

2. 16 exchange students got affiliated with the University of Delhi under various MoUs in the academic year 2014-15.
3. Mr. Pedro Fialho from Michigan university visited Delhi University to participate in the Innovation Project with Sri Venkateswara College in the month of July 2014.
4. Two M.Tech students T. Makhize and L.D. Mthembu from Durban University of Technology, South Africa joined the laboratory of Professor R.C. Kuhad, Department of Microbiology for one month research during 30th September – 1st November 2014.

Details of the students of the University of Delhi going to various foreign universities in the year 2014

5. Two Students from CIC, Mr. Sahil Nakul Mathur (B.Tech. Innovation, IIIrd year) and Ms. Kirti Joshi (B.Tech. Humanities, II year) participated in the Student Learning Summit held at the University of British Columbia, Vancouver during May 13 – 15, 2014 as a part of U21 AGM 2014 on the theme “How can universities best prepare students for the careers of the future?”
6. Two students from the Department of Germanic and Romance Studies, Ms. Neha Tajreja and Ms. Priyanka Sharma, MA German Final year students participated in the Heidelberg’s International Summer School held during August 4 – 29, 2014.
7. Ms. Niharika Kohli, a student of the Department of Electronic Science, South Campus received Erasmus Mundus (INTACT) scholarship for Doctorate Mobility of 12 months at the City University London starting from 1st October 2014.
8. Ms. Isha Dubey received Erasmus Mundus (IBIES) Scholarship for Doctorate Mobility at the Aarhus University, Denmark.
9. Dr. Rita Brara, Department of Sociology received Erasmus Mundus (IBIES) Scholarship for Academic Staff at the Aarhus University, Denmark

Details of Activities involving Foreign Students and Faculty visiting the University of Delhi in the year 2015

1. Under the MoU signed between the University of Delhi and Utrecht Business School, a team of 9 students and 2 faculty members from Utrecht Business School, Hogeschool Utrecht University of Applied Sciences visited the University of Delhi for an inter-cultural contact programme from January 27 – 30, 2015. On behalf of the University of Delhi, Miranda House hosted the team through a week long course on Management and Culture. 21 Students from Miranda House also participated. The primary purpose of the program is to provide our students with an opportunity for an inter-cultural interaction on an academic platform.
2. The University of Delhi hosted U21 Intensive Masters Module titled “**Security and Development in South Asia**” in collaboration with the University of Melbourne, Australia and University of Birmingham, UK during February 2 – 6, 2015. Thirteen Students from Melbourne, 8 students from Birmingham and students from University of Delhi participated in a week long module.

3. Ms. Lisa Hollands, a student of M.Sc. Cross-cultural psychology at Institute of Psychology, School of Human Sciences, University of Osnabrueck, Germany affiliated with the University of Delhi to do her Research Internship of 240 hours starting from February 2015 under the guidance of Dr. S.P.K. Jena, Department of Applied Psychology, University of Delhi (South Campus).
4. Under the MoU signed between the University of Delhi and Hokkaido University, Japan – Hokkaido University is holding “ a short Term Intensive programme” at the Department of English during February 15 – 24, 2015. Upto 15 graduate students along with staff members will be visiting Delhi University. Programme contents includes – Introduction to Indian Culture (diversity), Religion, Literature and History, Globalization, Global Citizens, Cultural immersion and social communication between the students of two universities field visits etc.
5. In the academic year 2015-16, around 15 students have affiliated with various colleges/departments under the existing MoUs for one semester/one academic year.

Details of the students of the University of Delhi going to various foreign universities in the year 2015

- Under the Faculty Training Programme, 24 college teachers are selected to do one year Master’s programme in UK universities. Out of 24 candidates, 3 candidates have withdrawn their candidature.
- Two students from CIC participated in the U21 Student summit held along with U21 AGM 2015 at Chile from May 5-7, 20



Fulbright Scholars from University of Delhi

Fulbright Program	Numbers 2008-2014					Universities visited	Subject areas
Fulbright –Nehru Student Research Program	1	3	4	4	6	Harvard University, Brown University, University of Pennsylvania, Columbia University, Yale University, Cornell University, University of Chicago, University of California, Berkeley, Rutgers University, University of Michigan-Ann Arbor, Duke University, Northwestern University, State University of New York, Emory University	Anthropology, Language and Literature, Business Administration, History, South Asian Regional Studies, Agriculture, Education, Law, Study of India, Sociology, Intellectual History, Environmental Science, Psychology, Medical Science, Visual Arts, Science and Technology
Fulbright-Nehru Lecturer	2						
Fulbright-Hays Doctoral Dissertation Research Program	3						
Fulbright-Nehru Senior Research Fellowships		1	1	2	2		
Fulbright Regional Research Program	1						
Fulbright Senior Specialists		1	1				
Fulbright New Century Scholar Program		1					
Fulbright-Nehru Visiting Lecturer Fellowships			1		1		
Fulbright-Hays Faculty Research Abroad Program			1				
Fulbright-Hays Doctoral Research Abroad Fellowships			2		2		
Fulbright-Nehru Teaching/Research Program				1	1		

US Fulbright Scholars to University of Delhi

Fulbright Program	Numbers 2008-2014					Universities	Departments of DU visited
Fulbright –Nehru Student Research Program	1		3	4	4	6	Sociology, English, FMS, History, Linguistics, Social Work, Botany, Law, Education, Persian Studies, Anthropology, Urdu, African Studies, Zoology, Music and Fine Arts, Physics and Astrophysics, Environmental Studies, Buddhist Studies
Fulbright-Nehru Lecturer	2						
Fulbright-Hays Doctoral Dissertation Research Program	3						
Fulbright-Nehru Senior Research Fellowships		1	1		2	2	
Fulbright Regional Research Program	1						
Fulbright Senior Specialists		1		1			
Fulbright New Century Scholar Program		1					
Fulbright-Nehru Visiting Lecturer Fellowships			1			1	
Fulbright-Hays Faculty Research Abroad Program			1				
Fulbright-Hays Doctoral Research Abroad Fellowships			2			2	
Fulbright-Nehru Teaching/Research Program					1	1	

**Inbound Mobility to University of Delhi under Erasmus Mundus Mobility Programme
(Including Visiting Faculty, UG, PG, Ph.D and Post Doctoral students)**

EMECW Lot 15- Ten students visited University of Delhi from the Universities

- Univ. of Vilnius, Lithuania
- Lund University, Sweden
- UvA, Netherlands
- Katholieke Univ, Leuven, Belgium
- Freie Universität Berlin, Germany
-

EMECW Lot 13 and Willpower- Seven students visited the University of Delhi from the Universities

- University of Vilnius, Lithuania
- Albert Ludwig Universität, Germany
- University of Deusto, Spain
- University of British Columbia, Canada

**Outbound Mobility from the University of Delhi to partner European Universities under
Erasmus Mundus Mobility (Including Visiting Faculty, UG, PG, Ph.D and Post Doctoral
students)**

EMECW Lot 15- Twenty Eight students visited the following universities

- Politecnico di Milano, Spain
- UvA, Netherlands
- Katholieke Univ, Leuven, Belgium
- Lund University, Sweden
- Univ. of Vilnius, Lithuania
- Freie Univ., Berlin
- Pierre & Marie Curie Univ, France

EMECW Lot 13- Twenty Two students visited the universities

- NTNU, Norway
- Lund University, Sweden
- Univ. of Deusto, Spain
- Freie Universität, Berlin
- KU, Leuven
- UvA, Netherlands
- Pierre & Marie Curie University, France

Outbound Mobility from the University of Delhi to various foreign universities in the Academic year 2013-14

- Mr. Mayank Jain, a student IV Semester, B.Tech/B.S. in Innovation with Mathematics and IT from Cluster Innovation Centre has been nominated to attend Global Problem Solving Summer Workshop on the theme "Water Management for Environmental Sustainability" to be held at George Mason University, Virginia, USA during June 29 – 13 July 2013.
- Two Students from CIC, Ms. Shreya Juneja and Ms. Madhulika Mukherjee, B.Tech/B.S. in Innovation with Mathematics and IT are nominated to attend Student Learning Summit to be held at the University of British Columbia, Vancouver during May 7 – 8, 2013 as a part of U21 AGM 2013.

Willpower- Eight students visited the universities

- Universitat Politecnica De Catalunya, Spain
- Universitat Degli Studi Di Padova, Italy
- Technische Universitat Munchen, Germany

EMEA Lot 11: Nine students visited the universities

- University of Milan, Italy
- University College Dublin, Ireland
- Pierre and Marie Curie University, France
- Lund University, Sweden
- University College London
- UvA, Netherlands

FACULTY TRAINING PROGRAMME

Fifty- two faculty members completed one year Masters degree programme in the following universities and subject areas

Subject Area	University
Bioinformatics	University of Edinburgh
Financial Mathematics	University of Edinburgh King's College, London
International Accountancy and Finance	University of Birmingham
Economics and Econometrics	University of Nottingham University of British Columbia University of Edinburgh University of Birmingham
Economics and Financial Economics	University of Nottingham
Finance & Investment	University of Edinburgh
Advanced Genomics & Proteomics	University of Nottingham
Accounting , Accountability and Financial Management	King's College London
Palliative Care	King's College London
Computer Security	University of Birmingham
Accounting and Finance	University of Edinburgh
Systems and Synthetic Biology	University of Edinburgh
High Performance Computing	University of Edinburgh
Nanoscience and Nanotechnology	University of Glasgow
Financial Forecasting and Investment	University of Glasgow
Global Media and Post-national Communication	University of London
Cancer Immunology & Biotechnology	University of Nottingham
Critical Theory and Cultural Studies	University of Nottingham
Financial Services and Society	University of Nottingham
MBA Entrepreneurship	University of Nottingham
Translational Neuroimaging	University of Nottingham
Finance and Investment	University of Nottingham

STRATEGIC INITIATIVES OF THE UNIVERSITY



University of Delhi has set up a Cluster Innovation Centre (CIC) with the objective of fostering an ecosystem of innovation and connecting research with application for the benefit of society. The CIC aims to support application-oriented research to solve real world problems by developing ideas into innovative applications successfully. The CIC focuses on developing affordable innovations that reach a large number of people and at the same time viable to be sustainable and relevant.



The **CIC ecosystem** consisting of the following major elements is setup and working at University of Delhi in order to achieve the above mentioned objectives:

Innovative Teaching and Research Programmes:

- (i) Four year undergraduate programme in **“B.Tech. (IT and Mathematical Innovations)”**. This course was started in September 2011.

Highlights of the course:

- Creative and Innovative, Interdisciplinary Project based approach, To work on real world situation based problems and find their mathematics & IT based solutions
- Innovation in relation to technology, management, entrepreneurship, business and communications, social aspects
- Establish two-way links between university, industry and society

- Harmonious blend of theory and hands-on projects



- (ii) Three year undergraduate programme in **“BA (Hons) – Humanities and Social Science”** – ‘Design-your-own-Degree’ under Meta-college concept. This course was started in September 2012.

Highlights of the course:

- Freedom to students to “design their own degree”
- Enable students to benefit from resources, talent and expertise in different colleges
- Basic courses in semesters one and six at the Cluster Innovation Centre to gain competence in core areas.
- Students given the freedom to choose courses to specialize in a particular stream such as "Journalism", "Historical Tourism", "Counseling" and "Art and Design".
- Emphasis on hands-on projects, virtual learning, internships and group based activities
- Inter and trans-disciplinarity approach to encourage a holistic understanding of Humanities.
- Flexible learning
- Integrated rewards for extra-curricular activities

- (iii) Two year postgraduate programme **“M.Sc (Mathematics Education)”** under Meta-University concept in collaboration with Jamia Millia Islamia, New Delhi. This course was started in January 2013.

Highlights of the course:

- A paradigm shift in Higher Education in India.
- Based on the premise that the ‘Whole is Greater than the Sum of the Parts’.
- Utilizes, exploits and create synergy between programmes, activities and partner institutions.
- Free students from the tyranny of boundaries and the constraints of location
- Combining “Collaborative learning” and “Trans-disciplinary learning”

- To move away from the conventional pedagogy of teaching mathematics especially at school level and to include methods of facilitating learning such as storytelling, projects, group work and participative learning.
- To establish inter-disciplinarity between mathematics and other subjects from Humanities and the Social Sciences.
- To encourage collaborative learning through group activities and hands-on learning.
- To provide in-service training for school teachers.
- To learn to apply mathematics to real life situations and help in solving.
- Mentor to serve as the Catalyst for learning enhancement



Establish linkages between industry and the University for innovation aimed for practical ends IT Maha Abhiyaan

DUCIC e-Business Circuit, a joint collaboration of Cluster Innovation Centre, PHD Chambers of Commerce and Industries and IamSMEofIndia initiated IT Maha Abhiyaan to help the MSMEs in finding ways to leverage technology and services to be more efficient, reduce costs, and to develop flexibility to respond rapidly to the changing market conditions thereby transforming MSMEs to “Digital MSMEs”

1. **Linkage with a village and/or an urban slum/low income area:** CIC proposes to work closely with villages and/or slum clusters/low income neighborhoods so as to focus on solving local problems. This will provide a clear purpose for the innovation activities by focusing research and innovations on solving real world problems.

(i) Jagatpur village

Students adopted Jagatpur village (near Yamuna Biodiversity Park) to provide innovative solutions to the problems faced by the people there. Interaction with the people of Jagatpur helped them to understand their problems and needs.

(ii) Kusumpur Pahari

Students visited Kusumpur Pahari, the largest slum in South Delhi to gauge the problems faced by the people there. Survey, interviews, analysis revealed a severe water crisis because of the geology of the area, lack of adequate planning of distribution of water, lack of gender sensitivity. Students tried to bring about a change in the water management policy, create a sustainable model

for waste water management, create and enact street plays for gender sensitisation

2. **Design Innovation Centre**

CIC provides a platform to University of Delhi and all its partners to forge mutually beneficial linkages to initiate and assist innovation activities and act as a catalyst and facilitator. Its primary objective is to create an ecosystem that connects and facilitates various stakeholders on all aspects of the innovation process including training and support. By promoting innovation, channelling various incentives that benefit the cluster, CIC acts as an incubating body managing the growth of innovation in this ecosystem.

Distinguished faculty at CIC

For research activities at Cluster Innovation Centre there is provision of recruiting short visits faculty from India and abroad at various levels under the given below list of broad categories including noble laureates, honorary professors, visiting professors, adjunct professors etc.

Memorandum of Understandings (MoUs) of CIC

To connect with industry/employers/corporate sectors Cluster Innovation Centre (CIC) has already entered into following Memorandum of Understandings (MoUs):

- **MoU with Copenhagen University:** The two institutions agreed to encourage the implementation of specific programmes of cooperation through joint research activities, exchange information relating to their activities in teaching and research in the fields of mutual interests. In pursuance of that, opportunities for visits or exchange of faculty members and students are also planned.
- **MoU with PHD Chamber of Commerce and Industry and IamSMEofIndia:** The project, called 'IT-Maha Abhiyaan' is an initiative of PHD Chamber of Commerce and Industry to build capacities of Micro, Small and Medium Enterprises (MSME) by making them IT ready through an alliance of IamSMEofIndia and Cluster of Innovation (CIC) of the Delhi University.
- **MoU with Indian Institute of Technology, Bombay on e-Yantra:** Under this MoU, the Cluster Innovation Centre will act as Nodal Centre (NC) to coordinate all the activities of 20 institutes/colleges in Delhi and NCR region including training of teachers with a mission to spread education in the area of embedded systems and Robotics in the country.
- **MoU with Jamia Millia Islamia on Meta University concept:** This is to give an impetus to the concept of the Meta University that the competent bodies of both, the Jamia Millia Islamia and the University of Delhi have consented, agreed and decided to offer a Joint Degree Programme in the discipline of **Master of Mathematics Education** (equivalent to M.Sc. Mathematics Education).
- **MoU with TATA Power Delhi Distribution Limited:** Cluster of Innovation Centre, University of Delhi, in its constant effort to take innovation to greater height through industry-academia linkage, signed a Memorandum of Understanding with Tata Power Delhi

Distribution Limited (TPDDL). The MoU envisages collaboration in areas of demand automation, data analytics, advanced metering infrastructure that will not only benefit the company but the society and nation in general.



- **Agreement with NTPC Limited on educational projects for social sensitization:** Cluster Innovation Centre, University of Delhi on January 03, 2014 entered into an agreement with NTPC Limited to provide CIC the total financial assistance of Rs 5.00 Lakhs to do 16 Educational Projects for social sensitization by the students of the course B.Tech (Humanities) at CIC, University of Delhi.

Collaborations

CIC has a vibrant and diverse academic culture where challenges from different segments of society are taken up with enthusiasm. This has led to some of the most constructive collaborations with industry, R&D agencies and academia across the nation like Defence Research and Development Organization (DRDO), National Council for Educational Research and Training (NCERT), Indira Gandhi National Centre for Arts (IGNCA), National Thermal Power Corporation (NTPC), Delhi Jal Board (DJB), Delhi Police, Gandhi Smriti, Department of Applied Sign Language, IGNOU, Prayas - An NGO working with children in conflict with law, National Association for Deaf (NAD), Noida Deaf Society (NDS), Katha, New Delhi, Central Board of Secondary Education, Directorate of Education etc.

Projects Taken Up by CIC students

1. Project cubicle – a markless deployment framework for augmented reality applications.
2. Mathematical side of bungi jumping omr sheet using digital images
3. Web application for sign language recognition
4. Tb-motif & tb-promoter
5. Sentire- smart canteen management solution
6. Attensys – attendance management system
7. Monetary – fiscal policy interactions
8. DU metro feeder bus services
9. Tyre pressure monitoring system
10. Green rating of colonies

11. Mapping of 1857 in Kanpur and Merrut
12. Sign language project
13. Third gender and identities
14. Empowering the adolescent girls
15. Baolis and linking with DJB water network
16. Mathematics accessible to children with special needs
17. Shaping potentials in mathematics among Muslim school girls
18. Neurocognitive basis of mathematical thinking
19. Mathematics behind Jantar Mantar
20. Interface between school mathematics and university mathematics education

Achievements of CIC during 2014-15

- India's First ever Meta University joint degree of DU and JMI was awarded to first Batch of 15 students of M.Sc. (Mathematics Education). It carries logos of both partner universities and signature of both the Vice Chancellors.
- Cluster Innovation Centre has recently signed an MoU with TATA Power Delhi Distribution Limited (TPDDL) for participation of students in solving problems in areas of demand automation, data analytics, advanced metering infrastructure that will not only benefit the company but the society and nation in general.
- CIC students along with faculty mentoring has constructed an affordable 3-D printer that cost less than 1/10th of the market price of about rupees 2 Lakhs.
- Under Technology Business Incubator (TBI), 7 startups are being incubated at CIC. The startups include Innovative teaching methodology using mathematical board games, interactive gaming systems and data analytics. Others are on application development for visually impaired, intelligent devices on apparel and development of micro-ecosystem for incubating student innovations.
- Under Hub & Spoke model, Cluster Innovation Centre has started a Design Innovation Centre (DIC) along with School of Planning and Architecture (SPA), Jamia Millia Islamia (JMI) and Islamic University of Science and Technology(IUST), Srinagar. It is a MHRD sponsored project with primary objective to create an ecosystem that connects and facilitates various stakeholders on all aspects of the design innovation process including training and support.
- Cluster Innovation Centre is jointly working with Ministry of Railways, Government of India towards development of a Train Punctuality Index (TPI) and real-time monitoring system on measuring train network performance using IT and mathematical modeling.
- To establish linkages between industry and academia for innovation, DUCIC e-Business Circuit, a joint collaboration of Cluster Innovation Centre, PHD Chambers of Commerce and Industries and IamSMEofIndia initiated IT Maha Abhiyaan to help the MSMEs in

finding ways to leverage technology and services to be more efficient, reduce costs, and to develop flexibility to respond rapidly to the changing market conditions thereby transforming MSMEs to “Digital MSMEs”.

- Even before passing out, about 15 students (40%) of First batch of B. Tech. (IT and Mathematical Innovations) has already been offered jobs by the companies where they carried out internships during their coursework. More than 8 students (<20%) have initiated their own start-ups and rest have opted for higher education.
- Under an MoU with Indian Institute of Technology, Bombay on e-Yantra Cluster Innovation Centre is acting as Nodal Centre (NC) to coordinate Robotic activities in 20 institutes/colleges in Delhi and NCR region including training of teachers. This project of e-Yantra is funded by MHRD with a mission to spread education in the area of embedded systems and Robotics in the country.
- Cluster Innovation Centre has entered into an agreement with NTPC Limited on educational projects for social sensitization.
- Office of Principal Scientific Advisor (PSA) to the Government of India has funded a project on “Establishing research based practices to identify and mentor gifted students in Mathematics and Science”. Under the project, faculty of CIC along with students of Meta University Course M.Sc. (Mathematics Education) at its premises regularly mentors school students from both government and private schools.
- Under its mandate of providing linkage with a village and/or an urban slum/low income area, Cluster Innovation Centre has worked with villages and/or slum clusters/low income neighborhoods so as to focus on solving local problems. This include working on water crisis and gender sensitization of Kusumpur Pahari, the largest slum in South Delhi and providing transportation solution for Jagatpur Village in Burari, Delhi.



GLOBAL INITIATIVE FOR ACADEMIC NETWORK (GIAN)

Global Initiative of Academic Networks (GIAN) in Higher Education aimed at tapping the talent pool of scientists and entrepreneurs, internationally to encourage their engagement with the institutes of Higher Education in India so as to augment the country's existing academic resources, accelerate the pace of quality reform, and elevate India's scientific and technological capacity to global excellence.

Long and Short Term Goals of GIAN

- To increase the footfalls of reputed international faculty in the Indian academic institutes.
- Provide opportunity to our faculty and students to learn and share knowledge and teaching skills in cutting edge areas.
- To create avenue for possible collaborative research.
- To increase participation and presence of international students in the academic Institutes.
- Opportunity for the students of different Institutes/Universities to interact and learn subjects in niche areas through collaborative learning process.
- Provide opportunity for the technical persons from Indian Industries to improve understandings and update their knowledge in relevant areas.
- Motivate the best international experts in the world to work on problems related to India

The University of Delhi wishes to invite scholars in the following categories as approved by the Executive Council:

(i) **Nobel Laureates** - to be invited over 3 years. To be appointed on contract for 3 years and offered lodging on campus and suitable honorarium per month of visit.

(ii) **Cadre of 100 scholars from abroad** - They would be distinguished persons known internationally for their contribution in different realms of human endeavour. Their contract period and duration will be determined on a case by case basis. The numbers invited will also be determined according to requirements at Cluster Innovation Centre (CIC).

(iii) **Honorary Professors** - Listed below are the names of distinguished, renowned and reputed personalities from different fields to be appointed Honorary Professors. They are eminent persons with high caliber and their contribution in their field has made a mark in the society.

1. Prof. Priyamvada Natarajan, Departments of Astronomy and Physics, Yale University, USA.
2. Dr. Rajagopala Chidambaram, DAE Homi Bhabha Chair Professor, Bhabha Atomic Research Centre, Trombay & Principal Scientific Adviser to Govt. of India.
3. Shri Gulzar, Eminent Poet & Lyricist.
4. Dr. Sonal Mansingh, Distinguished Indian Classical Dancer.
5. Prof. Krishan Lal, President, Indian National Science Academy (INSA), Delhi.
6. Dr. M. K. Bhan, Former Secretary Govt. of India, Department of Biotechnology, Ministry of Science and Technology.
7. Dr. T. Ramasami, Former Secretary, Dept. of Science & Technology, Govt. of India.
8. Prof. K. B. Sinha, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore.

9. Prof. Rajendra Bhatia, distinguished Scientist, Indian Statistical Institute, Delhi.
10. Dr. Ramesh Mashelkar, Former Director General of CSIR, New Delhi.
11. Prof. Samir Brahmachari, Chief Mentor, OSDD and Former Director General, CSIR, New Delhi.
12. Dr. K. Kasturirangan, Member, Planning Commission, Government of India and former Chairman, ISRO.
13. Dr. Srikumar Banerjee, Former Chairman, Atomic Energy Commission of India and Secretary DAE, Govt. of India.
14. Dr. Ratan Kumar Sinha, Chairman, Atomic Energy Commission of India.
15. Prof. M. S. Raghunathan, Head, National Centre of Mathematics, IIT, Mumbai.
16. Dr. Vijay Kumar Saraswat, Former Director General DRDO and the Chief Scientific Advisor to the Minister of Defence, New Delhi.
17. Prof. Virander Singh Chauhan, Director, International Centre for Genetic Engineering and Biotechnology, New Delhi.
18. Prof. M. S. Narasimhan, Former Professor of Mathematics, TIFR.
19. Prof. Ramesh Narayan, Thomas Dudley Cabot Professor of the Natural Sciences Director of Graduate Studies, Harvard University.
20. Prof. Vijaya Ramachandran, Blakemore Regents Professor of Computer Science, the University of Texas, Austin.

(iv) Visiting Professors – (1) Mr. Brij Bakshi, Former Addl. Director General (Programme), Doordarshan, and (2) Dr. S.Y. Quraishi, Former Chief Election Commissioner of India.

(v) Adjunct Professors - (1) Ms. Mrinal Pande, Senior Journalist, Author and Editor. (2) Dr. Ganesh N. Devy, Renowned literary critic and activist. (3) Dr. Suneet Tandon, Director, Indian Institute of Mass Communication.

(vi) Emeritus Professors – (i) Prof. Ajit Iqbal Singh, Formerly at Department of Mathematics, University of Delhi.

SHODHGANGA-DIGITIZATION OF THESIS

Theses and dissertations are known to be the rich and unique source of information, often the only source of research work that does not find its way into various publication channels. Theses and dissertations remain an un-tapped and under-utilized asset, leading to unnecessary duplication and repetition that, in effect, is the anti-theses of research and wastage of huge resources, both human and financial.

The UGC Notification (Minimum Standards & Procedure for Award of M.Phil. / Ph.D Degree, Regulation, 2009) dated 1st June 2009 mandates submission of electronic version of theses and dissertations by the researchers in universities with an aim to facilitate open access to Indian theses and dissertations to the academic community world-wide. Online availability of electronic theses through centrally-maintained digital repositories, not only ensure easy access and archiving of Indian doctoral theses but will also help in raising the standard and quality of research. This would overcome serious problem of duplication of research and poor quality resulting from the "poor visibility" and the "unseen" factor in research output. Shodhganga" is the name coined to denote digital repository of Indian Electronic Theses and Dissertations set-up by the INFLIBNET Centre.

The word "Shodh" originates from Sanskrit and stands for research and discovery. The "Ganga" is the holiest, largest and longest of all rivers in Indian subcontinent. The Ganga is the symbol of India's age-long culture and civilisation, everchanging, ever-flowing, ever-loved and revered by its people, and has held India's heart captive and drawn uncounted millions to her banks since the dawn of history. Shodhganga stands for the reservoir of Indian intellectual output stored in a repository



The University of Delhi has signed a Memorandum of Understanding under the Shodhganga project with UGC-INFLIBNET. Shodhganga is a repository of Indian Electronic Thesis and Dissertations. It requires compulsory submission of the thesis online in the Shodhganga repository. The University of Delhi is in the process of facilitating the smooth implementation of the project.

The University has issued guidelines for submitting plagiarism reports to the library and examination branch before submission of thesis.

An ETD lab is being set up for the purpose so that the thesis submitted can be uploaded on the Shodhganga website in the shortest time.

The University students of doctoral research submit around 400 thesis per year.

DIGITAL INDIA INITIATIVE OF UNIVERSITY OF DELHI ELECTROPRENEUR PARK

Digital India envisions transforming our nation and creating opportunities for all citizens by harnessing digital technologies. It is to empower every citizen with access to digital services, knowledge and information and come up with policies and best practices from around the world to make this vision of a digital India a reality. The Digital India project aims to ensure that the Government's services are available to citizens electronically and help people by reducing paperwork. The best part of this initiative being it will also connect rural regions and remote villages ensuring that they too have high-speed Internet services.

The Digital India Project is a better version of the already running National e-Governance Plan. The Digital India Project aims to provide thrust to nine pillars identified as growth areas. These include — broadband highways, mobile connectivity everywhere, public Internet access programme, e-Governance, e-Kranti (which aims to give electronic delivery of services), information for all, electronics manufacturing, IT for jobs and early harvest programmes.

Apart from existing e-governance projects, the Central Government is also planning to restructure National Informatics Centre that takes care of IT projects in Government departments. The Government will also recruit more Chief Information Officers (CIO) in at least 10 significant Ministries so that various e-Governance projects could be designed, developed and implemented faster. The Department of Electronics and IT (DeitY) will create positions within the Department for managing the programme. It will not be incorrect say that making India digitally connected will take it to another level — making *Sabka Saath Sabka Vikas* a genuine reality.

The Delhi University signed an MoU with STPI and IESA under the aegis of Ministry of Electronics and Information Technology (DeitY). The first-of-its-kind Electropreneur Park to support startups in electronic system design and manufacturing (ESDM) is to be established at South Campus of Delhi University and will become functional very soon. The park has been set up to bridge this gap and provide an entrepreneurial platform to the young community and students.

The IESA is the implementation agency for the project, it has also roped in CyberMedia (India) Online Limited (CIOL) to support it in execution of the project. With STPI providing funding and management of the incubation centre and DU the infrastructure, knowledge experts and also incubatees, IESA and CIOL shall provide industry connect, mentoring, technical know-how, promotion and outreach, in addition to venture capital access for the incubatees.

The park, which is first-of-its-kind to be established in the country, has infrastructural facilities, including world-class testing systems and measuring equipment.

This park aims at providing budding entrepreneurs with tools and infrastructure that are generally very expensive. The park will not only provide the infrastructure but enable access to domain experts, mentors, shared consultants and services. The objective is to set up 50 enterprises in five years. We will invite ideas from young entrepreneurs and a panel of experts from industry and academia.

UNIVERSITY INFORMATION MANAGEMENT SYSTEM'

The University of Delhi in early 2013 initiated digital automation of various key processes of the University as one of the core objectives. The University devised a innovative model by involving student interns and faculty and setup a product and services division in Institute of Informatics & Communication at South Campus, where all the digital applications were developed in-house with a vision to promote open source culture. This initiative culminated into University's very own 'University Information Management System' (UIMS).

Some of the key processes (part of the UIMS framework) have been developed and in use for the last three years:

- Centralized UG Admission System
- Centralized PG Admission system
- Recruitment System (Teaching and Non Teaching)
- Research Projects Management
- Other Charges Register
- File Retrieving System (Digitization and Archiving)
- Payroll System
- HR leave management system

UIMS is now providing the support and services to the colleges and other Universities for their online applications (e.g. recruitment, conduct, screening as per UGC norms etc.)

RESEARCH FACILITIES AT THE UNIVERSITY

Biotech Centre

With the biotechnology industry registering over 35% increase in the last few years, this industry is seen as one of the key sectors that will contribute to the socio-economic growth of the country. The Government of India has been supporting this industry since 1986 by establishing a strong network of research institutes and developing academic institutes to fulfill the human resource requirement. All these efforts have led to adequate research potential and activity in the area of biotechnology, which can be utilized for industrial and agricultural applications. Thus, it is of paramount importance to develop interfaces between universities and industry through the concept of technology parks to explore the availability of the work force and scientific expertise that exists in the country. In many cases, seminal discoveries of a fundamental nature in electronics and biotechnology have been converted into products of high importance and value through this concept. The facility developed at UDSC is a trendsetter for the development of university-industry interaction and technology business incubation with the government taking an active part in promoting the effectiveness of this strategy. The concept is to provide a world class infrastructure for life sciences research, accelerate commercialization of new technologies, enable the biotech start ups to forge alliances with research institutions, academia, industries, foster and mentor the challenges in biotechnology investments and promote bio-cluster effects.

Central Instrumentation facility (North Campus and South Campus)

Instruments CIF, South Campus	Instruments CIF, North Campus
7900HT Fast Real Time PCR	Bruker HRXRD
Upgrade 3100-Avant to 3130xl Genetic Analyzer	Oxford SCXRD
J-815 150-S CD Spectrometer	FEI HRTEM
Stopped Flow Mixer SFM- 300/S	TEM Sample Equipment M/s Gatan equipment M/s Quorum equipment
Leica SP-5 Confocal Laser Scanning Microscopy	Jeol FT-NMR
BD FACS Calibur with sorter and Autoloader	Waters DSC
GEN III Omnilog Plus System	Jasco CDS
Water UPLC System	Sentech Ellipsometer
3730 48 Capillary DNA Analyzer	Critical Point Dryer
4800 plus Maldi-TOF-TOF Mass Spectrometer Analyzer	Laser Capture micro-dissection microscope

Vitek 2 Compact	Scanning electron microscope
Phosphor Imaging System FLA 9000	Laser Raman Spectrometer
2D Electrophoresis System with Accessories	Rigaku XRD Spectrometer
Environment Plant Growth Facility	FT-IR Spectrometer
Computational Facility (Servers)	DTA/TGA/DSC
	ESR Spectrometer
	CHNSO Analyzer
	AAS (Graphite-Furnace)
	CHNSO Analyzer

Instruments above Rupees 25 lakhs.

INFORMATION TECHNOLOGY NETWORK OF DU

The University of Delhi has always placed a lot of importance to the vital role of communications and information technology in achieving the University's missions and objectives. As the need and dependency on information technology has grown, and as more and more digital systems are used and shared by students, faculty and staff, an increased effort has been made at all levels to meet the challenges of streamline the ICT setup in all the colleges and the departments of the University.

The ICT network of University of Delhi connects all these colleges and departments together as a comprehensive whole, with all the resources such as electronic library resources, application servers and internet being shared freely among all the faculty, staff and students. Using this network, the entire University is connected to the *National Knowledge Network*, which is a state-of-the-art multi-gigabit pan-India network for providing a unified high speed network backbone for all knowledge related institutions in the country.

University of Delhi currently has two 1 Gbps (gigabit) fibre-based network connections (expandable as need grows), one each for North and South campuses to connect to NKN and internet. There are around 13 on-campus colleges which are directly connected to the campuses by fibre and are able to connect to NKN and internet. The off-campus colleges are connected to campuses using 40Mbps links which then connects them to the NKN and internet. There is a 100 Mbps link connecting the North and South campus of the University.

The entire University network is protected by state-of-the-art Unified Threat Management devices and the entire network is designed with failover protection and enhanced reliability. All colleges are Wi-Fi enabled and campuses are in the process of being Wi-Fi enabled. The data centre of the University hosts about 80 servers which are used to maintain the university websites, email systems, databases, networking systems, backups etc. The University is actively using video-conferencing and web-casting for delivering e-lectures.

DELHI UNIVERSITY LIBRARY AS A LEARNING RESOURCE SYSTEM

Delhi University Library System is a manageable combination of physical and virtual collection and its associated information services, wherein on the one hand, the traditional system of library holdings is maintained and on the other hand, ICT based services are implemented. Delhi University Library System is accomplishing its task of reaching to wider academic community. We have advanced our web activity with the subscription of high quality electronic databases being made available through Delhi University Campus Network to teachers, students and research scholars. Among these many databases are accessible through UGC-INFONET Digital Library Consortium. DULS also promotes open access e-resources. Our success lies on its use by the academic community of Delhi University. Delhi University Library System is regularly conducting innovative Information Literacy Programs (ILP) for the benefit of students, researchers and faculty members and also making efforts in developing tutorials to make the community proficient in the use of World Wide Web. Our OPAC is also being strengthened. We endeavor to further improve all our efforts to facilitate right information to right user at the right time.

Delhi University Library System supports the research, academic and teaching needs of students and Teachers of the University and colleges affiliated to the University.

Organization and Governance

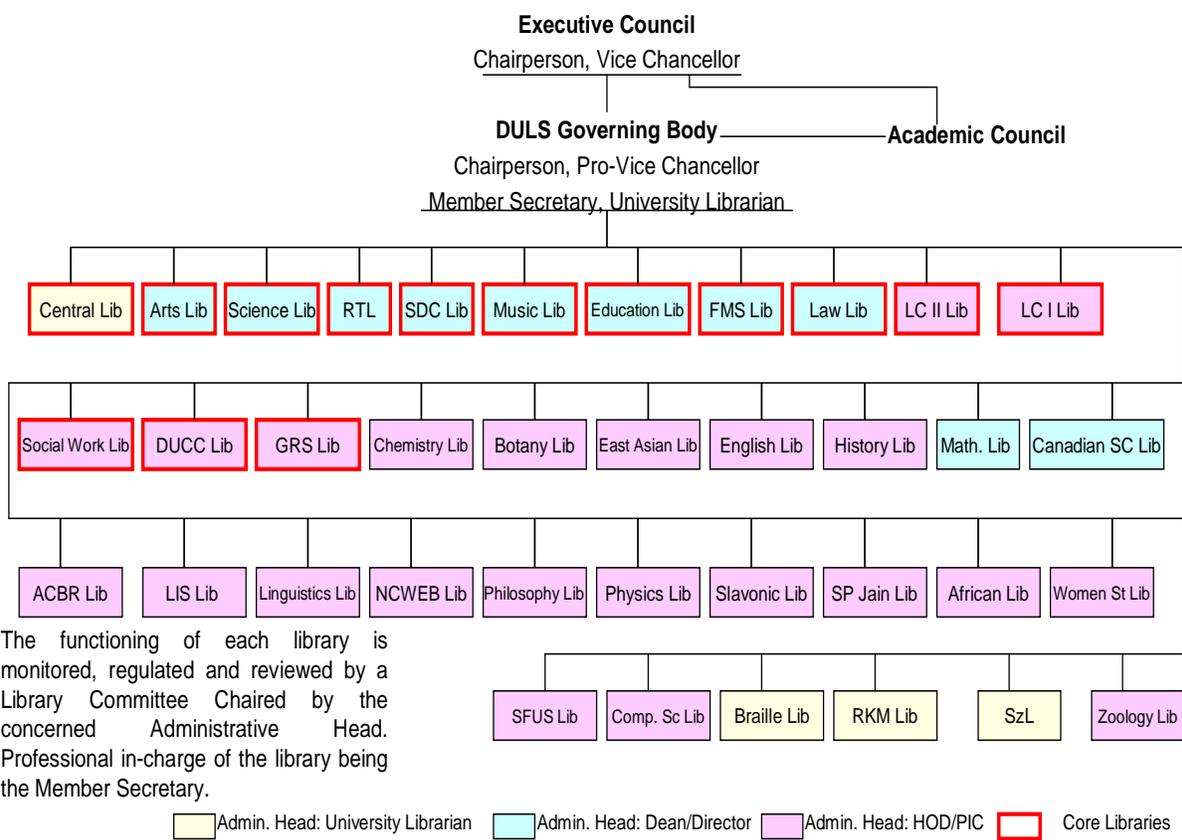
Delhi University Library System (DULS) comprises the Central Library and the libraries established in the various campuses, faculties, schools, departments and centers of the University of Delhi. The total number of the constituent library units is presently 37 (Thirty seven). The vast group of libraries has a two tier control mechanism, as provided under Ordinance XVI of the University Calendar.

At unit level, there is a Library Committee and the overall governance of the system is assigned to the Delhi University Library System- Governing Body. List of 37 constituent libraries currently managed by DULS Staff is as follows:

1. Central Library (CL)
2. Arts Library (AL)
3. Delhi School of Economics, Ratan Tata Library (RTL)
4. South Delhi Campus Library (SDCL)
5. Central Science Library (CSL)
6. Faculty of Law Library (FLL)
7. Faculty of Management Studies Library (FMSL)
8. Faculty of Music Library (FML)
9. Faculty of Mathematical Science Library (FMTSL)

10. Faculty of Education Library (FEL)
11. Department of African Studies Library (DASL)
12. Department of Botany Library (DBL)
13. Department of Chemistry Library (DCL)
14. Department of Computer Science Library (DCSL)
15. Department of East Asian Studies Library (DEASL)
16. Department of English Library (DEL)
17. Department of Germanic and Romance Studies Library (DGRSL)
18. Department of History Library (DHL)
19. Department Library and Information Science Library (DLISL)
20. Department of Linguistics Library (DLS)
21. Department of Philosophy Library (DPL)
22. Department Physics and Astrophysics Library (DPAL)
23. Department of Slavonic and Finno-Ugrian Studies library (DSFSL)
24. Department Social Work Library (DSWL)
25. Department of Zoology Library (DZL)
26. Braille Library (BL)
27. Delhi University Computer Centre Library (DUCCL)
28. Law Centre-I (LCI)
29. Law Center-II (LC2)
30. Non-Collegiate Woman's Education Board Library (NCWEBL)
31. S.P. Jain Research Centre Library (SPJL)
32. Women's Studies & Development Centre Library (WSDL)
33. R K Mission Undergraduate Library (RKUL)
34. South Zone Undergraduate Library (SZUL)
35. Department of Slavonic and Finno-Ugrian Studies Library (SFUL)
36. Dr Bhim Rao Ambedkar Centre for Biomedical Research (ACBRL)
37. Canadian Studies Library (CSL)

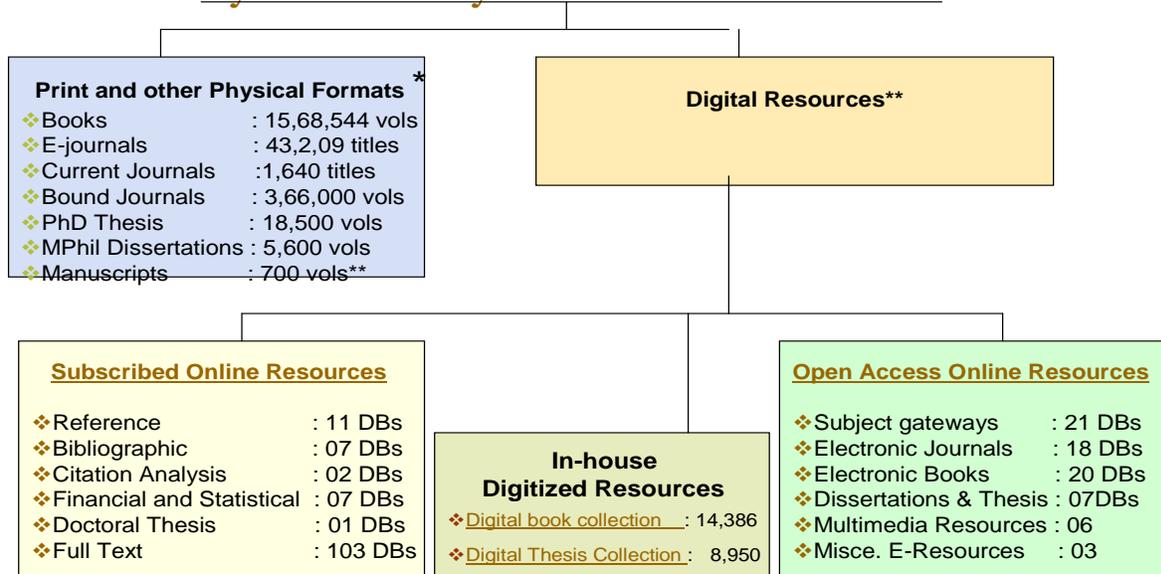
DULS Organizational Structure



Functionally, to ensure a balanced development of collection and to provide for specific requirements of the users of a given stream, there is a stream based distribution of subjects amongst the multidisciplinary or major libraries. The library which caters to the disciplines of science stream is located in the vicinity of concerned departments. Likewise, the social science and arts library are contiguous to the departments of those streams, for the benefit of the users.

DULS

Hybrid Library Resources at a Glance



* Procured and managed separately by each library.

** Managed by Central Library

Certain disciplines operating at Faculty level, like Mathematics, Management, Music, Education and Law etc have developed separate faculty level libraries. There are departmental libraries also.

DULS

Coverage of Multidisciplinary Libraries

LIBRARY UNIT	Disciplines	Departments Served	Remarks
Central Library	Reference Collection and DULS Integrated Services Of all Disciplines	All	
Arts Library	Arts (13Depts) Social Sciences (04Depts)	17	
Ratan Tata Library	Social Sciences	04	
Central Science Library	Sciences	14	
South Delhi Campus Library	All departments of South Campus	18	

Delhi University Library System takes special care for visually impaired students through Braille Library.

Delhi University Library System (DULS)

Delhi University Library System has during this period, taken several measures to revamp the Library and information services provided through its 37 constituent libraries, in keeping with the newly revised Ordinance XVI. A brief listing is given below:

Resources

The Library System added 23951 volumes of books/periodicals to its collection. The total collection as on 31-03-2013 is 1568544 volumes. It has 1640 periodicals on its current list of subscriptions, during the year 2012-13.

The DULS continued to strengthen the accessibility of electronic resources to the users. While the previously subscribed resources have been renewed, there are number of e-resources which have been added. There are more than 100 electronic databases (Subscribed by DULS + UGC INFONET + Open Source) in different subjects and disciplines that are available to the user community of the University.

LIST OF DATABASES SUBSCRIBED BY DULS

1. ABI/INFORM Complete	29 American Society for Micro Biologist
2. Academic Search Premier	30. Anthrosource
3. ACM	31. Bentham Science E Collection
4. American Geophysical Union Journal	32. British Parliamentary Papers
5. American Phytopathological Society	33. Emerald Management Extra
6. Business Source Premier	34. Kissing's World News
7. Capitalism, Nature, Socialism	35. Legalpundits
8. Capitalline Plus	36. Lexis Nexis
9. Chicago Manual of style	37. LISA
10. China Core Newspapers	38. LNCS
11. CLA Plus	39. Manupatra
12. Credo (Formerly Xreferplus)	40. Nature Publishing

13. Early English Books Online	41. Omnifile Full Text
14. Ecolit	42. Oxford Dictionary of National Biography
15. eJurix	43. Palgrave Dictionary of Economics
16. New York Review of Books	44. Sage Online
17. Encyclopedia of Britannica	45. SCC Online
18. Encyclopedia of Cyber	46. Science Direct
19. Encyclopedia of Islam	47. Science Magazine
20. Encyclopedia of Law Enforcement	48. Scifinder Scholars
21. Environment and History	49. Scopus
22. Geoscience World	50. Soc Index with Full text
23. Humanities International Complete	51. Statesmen's Yearbook
24. IEL Online	52. UMI Database
25. Indianjournals.com	53. Westlaw India
26. Indiastate	54. World Development Indicators
27. ISI Emerging Markets (CEIC-ASIA)	55. World Intellectual Property Search
28. JGR (American Geophysical Union)	56. WTO e-library

RESEARCH FELLOWSHIPS AND VICE CHANCELLOR STUDENT'S FUND

VICE – CHANCELLOR'S STUDENT FUND

This Fund has been an initiative launched to help deserving students. The Fund helps students admitted under various colleges and courses under various categories as mentioned below:-

1. Financial Assistance/Scholarship to APL/BPL students
2. Financial Assistance on Medical Grounds
3. Financial Assistance for economically disadvantaged students for Payment of hostel fees
4. Ex-gratia Payment for accidental death/permanent disability
 - a) Accidental Death
 - b) Permanent Disability
5. Financial Assistance for attending International Conference/Events
6. Other Assistance for encouragement of cultural activities and sports etc.

Travel Grant to Students from Vice-Chancellor Student's fund 2014-15

Particular	No. of Students
Travel Grant to Students for attending International Conferences/Seminar	Twenty Five

UGC-JRF Scheme

Year	Awardees (JRF/SRF)
2009-10	144
2010-11	210
2011-12	375
2012-13	363
2013-14	284
2014-15	309

UGC-Non-NET Fellowship

Year	Course	Number of Students
2009-10	M.Phil.	115
	Ph.D.	166
2010-11	M.Phil.	122
	Ph.D.	164
2011-12	M.Phil.	237
	Ph.D.	174
2012-13	M.Phil.	299
	Ph.D.	188
2013-14	M.Phil.	340
	Ph.D.	200
2014-15	M.Phil./Ph.D.	405

Vice Chancellor's Student Fund Details

Particular	2011-12		2012-13		2013-14		2014-15	
	No. of Students	Amount	No. of Students	Amount	No. of Students	Amount	No. of Students	Amount
Financial Assistance to APL/BPL Students	3,206	Rs. 65,59,500 (paid in 2012-13)	5,566	1,66,98,000	1,079	32,37,000	1079	32,37,000
NCWEB	-	-	-	-	680	20,40,000	680	20,40,000
Financial Assistance to Medical Ground	1	-	-	-	03	2,66,090	-	-
Hostel Expenses	2	Rs. 54,290	-	-	02	36,600	05	89,106
Ex- gratia payments	2 (3 students pending)	Rs.3,00,000	-	-	03	4,50,000	-	-

MAJOR AREAS OF RESEARCH

Arabic

Modern Arabic Literature, Islamic studies and Translation, Classical Arabic Literature, Indo-Arab Literature, Arab Civilization and Islamic Studies

Biochemistry

Basic and applied aspects of human diseases- macromolecular delivery, vaccine development and diagnostics, Gene regulation and pathogenesis of *Mycobacterium tuberculosis*, identification and validation of new drug targets of Tb, vaccine development in TB, identification of diseases like AIDS, hepatitis and tuberculosis, functional genomics, target delivery of drugs and DNA vaccines, studies on novel hemoglobin and hemoglobin disorders, novel therapeutic strategies against cancer, algal biotechnology.

Botany

Developmental and Reproductive Biology, Functional Genomics, Proteomics and Genetics, Physiology and Biochemistry, Plant Biotechnology, Systematics and Ecology, Plant-Microbe/Plant-Pest interaction, Biodiversity Conservation and Evolutionary Biology, Climate change and Abiotic Stress.

Buddhist Studies

Theravada Abhidhamma Philosophy, Theravada Buddhist Psychology, Theravada Buddhist Para-Psychology, Theravada Buddhist Eschatology, and Pali (Language and Literature), Buddhist Philosophy, Theravada, Mahayana, Logic & Tantra

Business Economics

Business Policy, Industry Studies, Regional Economic Development, Environmental Economics, Foreign Trade, Macro Economic, Policies, International Finance and International Marketing.

Computer Science

Computer Networks, Data Mining, Computational Intelligence, Algorithms, Computer Networks Data Mining, Web Intelligence, Multi-agent systems, Software Engineering, Data Mining Steganography and Steganalysis, Information Hiding, Coding Theory, Intelligent Data Analysis

Electronic Science

Semiconductor and Nano Materials, Solid state Devices, Opto-Electronics, Photovoltaics, Fibre/Integrated Optics, Optical Electronics, Microwave Photonics, Microwaves, Communication and Microwave Photonics, Communication, Microelectronics, Microwaves

English

Renaissance studies, gender studies, visual culture, Modernism, Queer Theory, Dalit Literature, Autobiographical Studies, Indian Literature, Post-colonial Studies, Oriya Literature, Translation, Postcolonial Literature and Theory; Indian Literature; Literary Gerontology; Families in Literature; Urban Cultures; Portuguese colonialism, Land laws and property rights, the nineteenth-century novel, history of Goa, 19th and 20th century American fiction and poetry

Environmental Studies

Environmental Biotechnology & Bioremediation, Nanobioscience, Ecogenomics, Himalayan Ecology, Conservation Biodiversity & EIA studies, Allelopathy, Invasion Ecology & Soil Communities, Behavioral Ecology, Evolution, Biodiversity conservation, Urban Ecology, Fish biology & Herpetology, Systematics, Molecular phylogeny Soil Microbial Ecology; Bio-/Phyto-Remediation; Plant-Microbe Associations, Bioresources, AMF studies *Diversity of symbiotic micro-organisms*, Ecotoxicology, Environmental Pollution & Health, Bioprospecting, Environmental Biotechnology, Plant invasions, phenotypic plasticity in plants, Bioacoustics.

Faculty of Management Studies

Growth & Behavior Patterns of Companies in India, Marketing, Financial, Human Resource and Organizational Dimensions of Modern Industry & Business.

Genetics

Heavy metal resistance against soil bacteria and fungi, molecular genetic improvement of rhizobacteria and biocontrol bacteria, metagenomics of soil, DNA marker technology for Brassica, development of transgenic rice, cotton, mustard, delayed ripening fruit ripening, multigene engineering and RNAi approach for developing transgenic tomato and brinjal, identification of susceptibility genes for Schizophrenia, Parkinson's etc., Pharmacogenetics and predictive medicine for single-gene disorders, Drosophila genetics, Plant-pathogen interactions using Arabidopsis.

Geology

Igneous & Metamorphic Petrology, Geochemistry, Structural Geology, Igneous Petrology, Geochemistry, Vertebrate Palaeontology, Geochemistry and Geochronology, Metamorphic Petrology, Environmental Geology, Hydrogeology,

Biostratigraphy, Engineering Geology, Structural Geology, Sedimentary Geology, Mineralogy, Petrology, Geomorphology, Fluvial system, Sedimentary Geology and Geomorphology, Hydrogeology, Geomorphology, Sedimentology, Micropaleontology, Metamorphic Petrology, Stratigraphy, Sedimentology

Germanic & Romance Studies

Francophone literature, Learner Production, Learner Corpus, Reading Errors

Hindi

Bhakti Literature and Movement and Modern Hindi Literature, Dalit literature, Fiction, Hindi language, Language pedagogy, Media, Indian society & culture , Indian education system, Modern Hindi Literature, Polish English Hindi Translation, Hindi Novel, Poetry, Dalit Literature and Hindi Journalism

Library and Information Science

Marketing of LIS Products , Cataloguing, History of libraries in India and Information Systems, Library, Information and Society, Library Cataloguing, ICT Application in Libraries and Information Activities; Web Designing and Content Development; Library Classification, bibliometric Scientometrics and webometrics studies; Government of India Publications, Indian Official Documents, Public Library System, Designing and evaluation of websites, Web-OPACs, e-journals, Social Networking Sites, Syntax, Discourse, Psycholinguistics

Linguistics

Documentation and description of endangered languages, Historical Linguistics, Phonology, Morphology, Language contact, Psycholinguistics and Neurolinguistics, Linguistic Stylistics, Applied Linguistics, Generative Phonology, Translation Studies, Sociolinguistics, Lexicography

Modern Indian Languages and Literary Studies

Indian Drama and Theatre, comparative Indian literature, translation studies, translations into Indian languages, postmodernism and post colonialism theories in Indian literature, Folklore and Tribal lore of India, Comparative Language & Literature (Telugu & Kannada), Translation from Kannada into Telugu, Medieval Bengali Literature, Women's Writings, Bengali Narrative Literature, Comparative Indian Literature, Translation studies, Modern Manipuri Language and Literature Linguistics, Modern Tamil Literature; Tamil Folklore and Comparative Indian Literature

History

Social, economic and cultural history, disciplinary history of archaeology, the interface between landscape archaeology and anthropology, medieval state and ecclesiastical institutions, peasant and tribal societies and movements, the process of sectarian and majoritarian identity formation, memory history-community, oral and performative narratives, the interaction between institutions of governance and newer forms of knowledge, with particular reference to the development of humanistic disciplines and of archaeology and museumology.

Mathematics

Analysis, Coding Theory, Algebraic Topology, Numerical Methods in differential equations, Linear Programming, Coding Theory, Complex Analysis, Semigroups of Operators, Fluid Dynamics, Algebra, Algebra, Frame Theory, Analysis of pde, Combinatorics, Fluid Dynamics

Microbiology

Microbial differentiation, food and industrial microbiology, environmental microbiology, agricultural microbiology, microbial pathogens and pathogenicity, medical microbiology, immunology, clinical microbiology, genetic engineering and microbial molecular biology.

Operational Research

Inventory Management, Supply Chain Management, Statistics, Optimization, Supply Chain Management, Mathematical Programming, Inventory Management, Financial Management, Software Reliability, Software Reliability

Persian

Indo-Persian Literature, Persian Lexicography, Medieval Indian Culture and Sufism, Indo-Iranian Literary relations in the context of translations of Classical Sanskrit and other Texts into Persian and their impact, Modern Persian Literature (Prose) and Translation and Interpretation from Persian into English and Vice-Versa, Persian Novel Writing in Iran

Philosophy

Indian Philosophy, Continental Philosophy, Comparative Philosophy, Philosophy of Language, Wittgensten, Philosophy of Religion, Contemporary Indian Philosophy, Philosophy of Mind and Cognitive Sciences, Buddhist Philosophy, Philosophy of Language, Philosophy of Mind, Ethics, Metaethics, Philosophy of Human Rights, Applied Ethics

Physics & Astrophysics

Condensed matter physics, Material Science, Complex systems computational physics, Non-linear dynamics, Plasma physics, nuclear and particle physics, polymers, Nano-materials physics, Semi-conductors, Bio-physics, Non-equilibrium statistical mechanics, Chemical physics.

Plant Molecular Biology

Stress Molecular Biology, Reproductive Biology, Signal transduction and photobiology, Bioinformatics, Functional genomics, Genomics and proteomics, Transgenics for crop improvement, Small regulatory RNAs, Plant viruses, Plant biotechnology for human health, Intellectual Property Rights.

Psychology

Research related to Dyslexia, mental retardation, hypertension, schizophrenia, depression, drug abuse, cognition in disabled children, belief systems, ageing, organizational processes.

Punjabi

Modern punjabi literature and western literary theory, Mythology & The Science of Myth and Gurmat Poetry, Folkloristics, Cross-disciplinary Semiotics, Western Poetics and Culturology, Medieval and Modern Punjabi Literature, Modern Punjabi Literature and Literary Criticism.

Sanskrit

Linguistics & Indian Philosophy (especially Nyaya & Vedanta), Indian Philosophy, Literature, Indian Culture and civilization and Religions, Epigraphy and Paleography, Sanskrit Drama, Poetry, History and culture of Ancient India, Veda, Dharma Shastra & Poetics

Urdu

Fiction & Criticism of Urdu Fiction, Drama, Theatre, Mass Media & fiction, Iqbalyat, Criticism.

Zoology

Animal Physiology, Animal Behavior, Aquaculture, Cell Signaling, Chromatin and Cancer Biology, Computational Biology, Endocrinology, Entomology, Genomics and Metagenomics, Systematics, Evolution and Biodiversity, Microbiology, Molecular Cell Biology, Radiation Biology, Reproductive Physiology and Toxicology

MORE AWARDS/HONOURS

Faculty members of the University continued to receive recognition in 2015 in addition to mentioned before. Some of these are:

1. Prof. Uma Garg Dean & Head, Faculty of Music was awarded "Sangeet Shree Award" by the Art & Culture Trust of India "Chakrapani's World School of Music" on 23 December 2014.
2. Dr. P.B. Kannakumar, Faculty of Music was conferred with "Sangeeta Kovidha" by Gayatri Fine Arts (regd.), Delhi on 29 June 2014 and also conferred "Sri Kanchi Kamakoti Peetam Asthan Vidwan" by Sri Jayendra Saraswati Sangeeta Vidwat Sabha during the Mallaratri Festival at Kancheepuram, Tamil Nadu on 24 September 2014.
3. Dr. T.V. Manikandan, Faculty of Music was awarded Malliyoor Sangita Brungam on 2 Feb. 2015.
4. Prof. Ved Pal Singh, Department of Botany, awarded Fellow, International Society of Plant Morphologists and Fellow, Linnean Society, London.
5. Prof. Veena Aggarwal, Department of Botany, elected for the award of Fellowship FISPM (Fellow of the International Society of Plant Morphologists), 2014 and also Awarded fellowship of Indian Society of Plant Physiology (ISPP) in December 2013.
6. Prof. Avinash Khare, Department of Physics & Astrophysics, elected Fellow of National Academy of Sciences, India (FNASc) 2014 and Fellow, Indian Academy of Sciences (FASc) 2014.
7. Prof. R.K. Saxena, Department of Microbiology, UDSC, Fellow of Indian Academy of Microbiological Sciences (FAMS) from Indian Academy of Microbiological Sciences. 2014.
8. Prof. R.C. Kuhad, Department of Microbiology, UDSC, awarded AMI-Dr. G.B. Manjrekar Award. 2014.
9. Dr. Anupa Sidhu, Director, Lady Irwin College was awarded Nina Sibal Award-August 2014 and Shikshak Ratna Award - September 2014. She also received the International Education and Leadership Summit Award 2015.
10. Prof. M.V. Rajam, Department of Genetics, elected as a Fellow of the Indian National Science Academy, New Delhi.
11. Prof. B.K. Thelma, Department of Genetics, awarded "Sunder Lal Hora Medal", 2014 and 'The Sanghvi Oration Award' of Indian Society of Human Genetics, 2015.
12. Prof. JP Sharma, Department of Commerce, "Shiksha Gaurav Puraskar" awarded in 2014 by the Centre for Education Growth and Research, New Delhi.
13. Prof. Maharaj K. Pandit, Department of Environmental Studies, elected Fellow, National Academy of Sciences of India, 2014-2015 and also appointed Radcliffe Fellow at Harvard University's Radcliffe Institute of Advanced Study.
14. Prof. P. Pardha Saradhi, Department of Environmental Studies, elected for the Fellowship of International Society of Plant Morphologists.
15. Dr. David Kothamasi, Department of Environmental Studies, received DST BOYSCAST award for Research at Overseas Institute, DST, Government of India.
16. Prof. Anita Sharma, Department of East Asian Studies, awarded Second World Buddhist Outstanding Award 2015 from Government of Thailand and the World Fellowship of Buddhist Youth Award.

17. Prof. Jitendra Paul Khurana, Department of Plant Molecular Biology, given Professor Jatis Chandra Sengupta Endowment Lecture Award by the West Bengal Academy of Sciences & Technology (WAST), in October 2014 and also awarded Prof. H.C. Arya Memorial Gold Medal by the Plant Tissue Culture Association of India, January 2015.
18. Prof. Paramjit Khurana, Department of Plant Molecular Biology, given Shri Ranjan Memorial Lecture Award (2014) by the National Academy of Sciences, India.
19. Dr. Yasmeen Arif, Department of Sociology, awarded a Fulbright – Nehru Senior Research Fellowship at the Institute for Advanced Study and Interdisciplinary Center for the Study of Global Change, University of Minnesota, April-May 2014.
20. Dr. Rashmi Joshi, Department of Slavonic & Finno-Ugrian Studies, received “The Golden Laurel” award from the Government of Bulgaria for her contribution to Bulgarian Studies, December 2014.
21. प्रो. श्योराज सिंह, हिन्दी विभाग, राष्ट्रभाषा हिन्दी गौरव सम्मान, संसदीय हिंदी परिषद, विधि भारती परिषद, नई दिल्ली, 21 नवम्बर, 2014 और राष्ट्रीय अम्बेडकर अवार्ड, भारतीय दलित साहित्य अकादमी, दिल्ली, 13 दिसम्बर, 2014.
22. डॉ. मुकेश गर्ग, हिन्दी विभाग, लक्ष्मी देवी ललितकला अकादमी अवार्ड (सर्वोच्च सम्मान), कानपुर, 15 मार्च, 2015.
23. डॉ. कुमुद शर्मा, हिन्दी विभाग, साहित्य श्री और पत्रकारिता श्री सम्मान, डॉ. रामजी लाल झांगिड़ हीरक जयंती समारोह समिति, दिल्ली, 7 नवम्बर, 2014.
24. डॉ. अल्पना मिश्र, हिन्दी विभाग, प्रेमचंद स्मृति कथा सम्मान, शाबरी फ़ाउंडेशन, बांदा, उत्तर प्रदेश, 2014.
25. डॉ. विनोद तिवारी, हिन्दी विभाग, देवीशंकर अवस्थी सम्मान (हिन्दी आलोचना), देवीशंकर अवस्थी संस्थान, दिल्ली, अप्रैल, 2014.
26. Prof. Gurmeet Singh, Department of Chemistry, was elected Fellow of the Indian Academy of Sciences , 2015.
27. Prof. Sohini Guha, Department of Political Science, received the New India Fellowship, 2014-2015.
28. Prof. Sunil Chowdhary, Department of Political Science, received the Pearson Award 2015 and the Global South Award, International Political Science Association.
29. Prof. Rup Lal, Department of Zoology, received Himachal Kalyan Sabha (Regd.), Delhi for his contribution in Research, on 23 November 2014 and also received Prof. S.R. Vyas Memorial Award (Biannual) from the Association of Microbiologists of India for 2014.
30. Prof. T. Satyanarayana, Department of Microbiology, elected Fellow of the Andhra Pradesh Akademi of Sciences, Hyderabad, for 2014-15.
31. Dr. Vipul Singh, Department of History, received the Carson Fellowship (2014-15) at Rachel Carson Center, LMU, Munich, Germany.

AWARDS/FELLOWSHIPS IN MEDICAL SCIENCES

1. Dr. S.K. Rasanias, Department of Community Medicine (LHMC), awarded Fellow of India Association of Preventive & Social Medicine (FIAPSM).
2. Dr. T.K. Ray, Department of Community Medicine (LHMC) , awarded Fellowship in HIV Medicine.

3. Prof. Usha Rani Singh, Department of Pathology (UCMS), awarded the best International Poster Award 2013 at ASCP Conference in Chicago, USA.
4. Prof. Shukla Das, Department of Microbiology (UCMS) was awarded Saoji & Sen Gupta Memorial Award (Gold Medal) at National Conference IAMM Jaipur, Nov. 2014.
5. Prof. N.K. Aggarwal, Department of Medicine, UCMS was awarded the distinguished fellowship of the Indian Congress of Forensic Medicine & Toxicology.
6. Prof. O.P. Kalra, Department of Medicine, UCMS was awarded the fellowship of American College of Physicians, 2014.
7. Prof. O.P. Kalra, Department of Medicine, UCMS was given Oration award by the Hypertension Society of India on 9-10 August 2014 & Khullar Oration award by the Indian Society of Nephrology on 18-21 December 2014.
8. Prof. Amitesh Agarwal, Department of Medicine, UCMS was awarded Fellowship of Indian Academy of Clinical Medicine in 2014, Fellowship of International Medical Sciences Academy in 2014, Fellowship of Indian College of Physicians in 2015 and Fellowship of Indian Society of Electrophysiology in 2015.
9. Dr. Beena Uppal, Department of Microbiology, (MAMC) given Maulana Azad Medical College Distinguished Alumnus Award 2014.
10. Dr. Vandana Roy, Department of Pharmacology, (MAMC) received a distinguished Teacher's Award from MAMC Old Students Association, 5 September 2014.
11. Dr. Akhil Dahiya, Department of Pharmacology (MAMC), paper on "Fixed Dose Drug Combinations: A to Z analysis" was chosen among the Best Three Papers in Public Health Conference in Bangkok, Thailand, 12-14 July 2014.
12. Dr. Vijay Kumar, Department of Dermatology & STD (MAMC) was awarded Prof. Ganapati Panja Memorial Award by Indian Association of Dermatologists Venerologists & Leprologists (IADVL) during 43rd National Conference DERMACON-2014, 12-15th February 2015 at Mangalore.
13. Dr. Jagdish Chandra, Department of Pediatrics, LHMC received R.V. Lokeshwar Oration award of Pediatric Hematology Oncology Chapter of IAP, PHOCON, in Chennai on 11 October 2014.
14. Dr. Suvasini Sharma, Department of Pediatrics, LHMC received IAP Young Researcher Award 2015 for her contribution to Research in Child Health Pedicon-2015, Indian Academy of Pediatrics, 24 January 2015.
15. Dr. Sneha Jain and Dr. Anju Seth, Department of Pediatrics, LHMC were awarded Dr. Satya Gupta Award for best research paper in the field of Social Pediatrics 2014 on "Comparison of transplacentally acquired anti-measles antibodies in HIV exposed as HIV unexposed infants at 6 months of age", Annual Conference of IAP Delhi State Branch, December 2014.
16. Dr. Gopinath M. and Dr. Anju Seth Department of Pediatrics, LHMC were awarded Dr. Sarla Vaishnava Award for Best Research Paper in the field of Metabolic disease 2014 on "Effect of impaired ambulation and anti-epileptic drug intake on vitamin-D nutrition status of children with cerebral palsy", Annual Conference of IAP Delhi State Branch in December 2014.
17. Dr. Shalini, Department of Obst. & Gynae, UCMS was awarded fellowship of National Academy of Medical Sciences, 18 October 2014.

18. Dr. Rajeev B Ahuja, Department of Burns & Plastic Surgery, UCMS, nominated for "Best DNB Alumnus Teacher Award" by the National Board of Examinations, 2014-15 and also received "President's Appreciation Award" of National Academy of Burns-India, NABICON 2015 , Ludhiana, 20-22 February 2015.
19. Dr. PS Bhandari, Department of Burns & Plastic Surgery, UCMS received "President's Appreciation Award" of National Academy of Burns-India, NABICON 2015,Ludhiana, 20-22 February 2015.
20. Dr. Prabhat Shrivastava, Department of Burns & Plastic Surgery, UCMS received "President's Appreciation Award" of National Academy of Burns-India, NABICON 2015, Ludhiana, 20-22 February 2015.
21. Dr. Arun Goel, Department of Burns & Plastic Surgery, UCMS received "Bhagirathi Award for Outstanding Services" during the year 2013-14, Delhi, 7 November 2014.
22. Dr. T.K. Taneja Department of Community Medicine, MAMC, given Dr. Harcharan Singh Oration award by IAPSM.
23. Dr. Shalini Rajaram, Department of Obst. & Gynaecology, UCMS awarded fellowship of National Academy of Medical Sciences, 18 October 2014.
24. Prof. Raj Kumar, Department of Pulmonary Medicine, VPCI, honoured with Shiksha Gaurav Puraskar 2014 for exemplary contribution towards higher education. Centre for Education Growth and Research (CEGR), New Delhi, 17July 2014.