Annual Report

2013-2014

(April 1, 2013 - March 31, 2014)

Our Vision

"To contribute to India and the World through excellence in scientific and technical education and research; to serve as a valuable resource for industry and society; and to remain a source of pride for all Indians."

Contents

Director's Report

"IITD Delhi is committed to provide excellent human resource to meet national needs and global expectations. It is a unique institution and a dream destination for those who wish to be leaders in science, technology and management. IITD Delhi is internationally recognised for delivering excellent education as the undergraduate and postgraduate levels, while endeavouring to become a great research institution."

Prof. R.K. Shevgaonkar

Director

IIT Delhi is pleased to release its Annual Report for the year 2013-14 and on this occasion, I am delighted to share with you all the highlights of our major activities, achievements, initiatives and future plans. At the outset, it is a great pleasure for me to inform that IIT Delhi in the latest survey conducted by various agencies such as India Today, Outlook and The Week, IIT Delhi continues to enjoy top ranks among all the engineering colleges/ institutions in India. In the QS World University Rankings, IIT Delhi has been ranked at the thirty-eighth position amongst the engineering institutions in the World with Electrical and Mechanical Engineering Departments being on the top. IIT Delhi also received the "Outstanding Engineering Institute Award" from ET NOW under National Leadership Awards. The Institute has taken a focused approach to improve its rankings further. I am pleased to dedicate this accomplishment of the Institute wholly to all faculty members, students and staff who have immensely contributed in every way possible taking the prestige of the Institute to newer heights.

Over the years, quietly but surely, we have also built a strong research tradition, which is easily seen in the impressive statistics that the Institute can boast of in terms of various research indicators. Specially, we have continuously improved on our credentials in research as evidenced by way of publications and citations and Ph.D 's per faculty. In the last Convocation of the Institute, 188 scholars received their Ph.D. Degrees. Our target of continuously searching for and significantly increasing the intake of quality candidates into our Ph.D. programmes is on the right course and we have grown to a significant level in this direction over the last few years.

With the support from the Government of India, industry and the alumni, IITD has been able to create an excellent infrastructure. While the Government has supported us with generous funding for which we are grateful, our alumni have extended significant support to the institute.

The Institute has been actively involved in collaborative programmes with national and international organizations/ universities to remain at the forefront in scientific and technological development and to share the knowledge for mutual benefits. The main objectives of collaboration include exchange of students and faculty, joint research, and fellowships for training and research at doctoral and post-doctoral levels.

Our faculty is one of the finest in the country and is recognised internationally for their quality of research, teaching and curriculum development. They also contribute greatly for the development of the nation by being associated with a large number of decision making bodies, providing crucial guidance and advice on policy matters and technical issues. Many faculty members received honours/awards and were elected Fellows of several professional national/international bodies during the year 2013-14.

During the period under report, international bibliographic databases indexed around 2484 research articles published by faculty members and researchers of the institute in international journals including 1696 articles indexed in

Scopus, an international indexing service in Science & Technology and Social Sciences as reported at the Convocation. The faculty members have also presented similar number of papers in national and international conferences. Besides, they have also published many books and conducted several continuing education programmes.

Lands for the Extension Campus of IIT Delhi, 50 acres each at Sonepat and Jhajjar, have been sanctioned by the Government of Haryana. Transfer and acquisition of Sonepat site has been completed and acquisition of Jhajjar site is in progress. Foundation Stone was laid by the Hon'ble Chief Minister of Haryana and Hon'ble Minister for Human Resource Development on 21st December, 2013. Science Research Park and Bio Research Park will be established at Sonepat and Jhajjar campuses respectively. Task forces have been constituted to initiate necessary activities for establishment of these Research Parks. A Mini Science/ Research Park is also being established at IIT Delhi campus to serve the purpose of a model precursor to the larger establishment at Extension Campus, Sonepat.

MHRD has approved setting up of Design Innovation Centre at IIT Delhi. The Centre will offer courses that have specific application focus on bio-design, inclusive innovation, transport system design, assistive technology and sustainable energy technology.

A Memorandum of Understanding was signed between the Mauritius Research Council and the Indian Institute of Technology (IIT) Delhi for setting up of an International Institute of Technology Research Academy (IITRA) in Mauritius. The objectives of the Memorandum are to, among others, promote scientific excellence and scientific development in Mauritius, through scientific and technical research, and generate new knowledge in the field of engineering. The Agreement provides for cooperation with focus on the provision of a world class research based educational platform for postgraduate research leading to M.Sc.(R)/M.Phil. and Ph.D. degree awards in identified areas, attracting foreign researchers and foreign students to Mauritius, in particular scientific experts from the Mauritian Diaspora, and building core research infrastructure including faculty and facilities. Collaboration and cooperation under the above MOU are underway.

To enhance the research, the Institute has created 50 Post-Doctoral Fellowships (PDF) at IIT Delhi. These are temporary research positions offered to those who seek to choose research as a profession. It is believed that the presence of the post-doctoral fellows at the Institute will further strengthen the research culture and output of the Institute and help promote inter-disciplinary research.

As per the decision of the Standing Committee of IIT Council, an internal review of the academic units of the Institute was carried out during the period February-March, 2014. This would be followed by a external peer review of the Institute based on the established guidelines of MHRD.

The Institute has commissioned a new unit called Enviornment Health and Lab Safety Unit. This is first of its kind in the country that would address to the safety needs and environmental health issues of the Institute.

The growing visibility of the Institute has been steadily leading to a larger role in partnerships. The institute has been actively involved in collaborative programmes with national and international organizations/universities to remain at the forefront in science and technological development and to share the knowledge for mutual benefits. IIT Delhi currently has around 80 and 60 operational MOUs with international and national institutions/organizations respectively.

The Institute provides seed research funding to the new faculty upon joining the Institute to the tune of Rs.10.00 lakhs (or more when necessary). During the year 2013-14, the Institute sanctioned New Faculty Research Grant of a total of Rs.310 lakhs to 30 faculty members out of the total funds of Rs.500 lakhs earmarked for this purpose.

A new UG curriculum has been implemented from the session 2013-14 with additional and more flexible features.

IIT Delhi celebrated the Institute Day on 16th August, 2013. The Hon'ble Minister for Human Resource Development was the Chief Guest on the occasion. The Hon'ble HRM also inaugurated the Amar Nath and Shashi Khosla School of Information Technology, released the Golden Jubilee Volume & the "Honour the Mentor" Book, and delivered Institue Day Address.

Two Centres of Excellence have been setup to focus and conduct research in the areas of Design Innovation Centre, and Cyber Security and information assurance.

The 44th Convocation of IIT Delhi was held on 9th November, 2013. The Hon'ble President of India was the Chief Guest of the function.

A Special Postal Cover was released on IIT Delhi by the Department of Posts, Govt. of India in a function held on 6th February 2014. Prof. R.K.Shevgaonkar, Director, IIT Delhi was the Chief Guest of the function.

During the year under report, 150 sponsored research projects with a total funding of Rs.68.65 crores and 430 consultancy projects with a total value of Rs.27.30 crores were undertaken respectively. 31 collaborative projects/consultancies with international funding were also undertaken during the period.

Training and Placement is an important activity of the Institute. The T & P Unit is mainly responsible for arranging practical training of the undergraduate students to meet their degree requirement and to provide world class job opportunities to undergraduate and postgraduate students after graduation for suitable jobs in the industry and various private and public sector organizations.

During the year 2013-14, the Institute received Rs.19,300.00 lakhs as Non-Plan Grant, Rs.15,475.00 lakhs as Plan Grant (Normal Non-Recurring Expenditure) and Rs.3000.00 lakhs as Plan Grant (Normal Recurring Expenditure). The income from internal accrual from the fees, interest and sponsored projects was to the extent of Rs.8507.45 lakhs.

For the year 2013-14, the actual recurring expenditure Non-Plan & Plan were to the extent of Rs.24472.92 lakhs and Rs.3088.37 lakhs respectively and Plan Non-Recurring expenditure was Rs.16955.68 lakhs. The Institute generated about 34.76% of the actual recurring expenditure through internal revenue

generation including fees, sponsored research, consultancies and continuing education programmes. Within the financial resources available to the Institute, a number of construction and development activities have been taken up to augment the Institute infrastructure.

Our Alumni have shown excellent achievements in every sphere of life and every part of the world. The recent examples are Dr. Raghuram Rajan, Governor of Reserve Bank of India and Dr. Avinash Chander, the Scientific Advisor to the Raksha Mantri. Our alumni have given donations to help us take some of our important projects forward, in addition to instituting Chairs and Young Faculty Incentive Fellowships, both of which help us to reward our bright faculty for their outstanding performance. In the last Convocation, Distinguished Alumni Awards were conferred on Prof. Rajpal S. Sirohi, Prof. Sugata Mitra, Dr. T.S. Ramakrishnan, Prof. Sanjay Puri and Prof. Varun Grover for their outstanding contributions.

A Development Office has been approved for establishment at the Institute. The vision of this Development Office is to secure philanthropic support and generosity of its worldwide alumni and also corporates and other foundations. The Development Office will work in partnership with IIT Delhi academics and students to build enduring relationships with external constituencies ensuring support on agreed academic excellence and infrastructural priorities.

Construction of IT School Building has been completed. The following projects are under construction and are likely to be ready for use by end of 2014:

- Lecture Theatre Complex.
- Clean room for Nanoscale research facilities.
- Eight Lifts for physically challenged persons in the academic area.
- Renovation of IIT hospital
- Construction of Olympic size swimming pool and renovation of badminton court

The Institute has undertaken several initiatives under the Green Initiatives programme which include setting up of 1MW online solar power system on the rooftop and once successful, the same will be implemented on most of the rooftops. Water harvesting has also been taken up in a big way to improve the drainage system and groundwater. The institute will also be setting up a water harvesting unit along with a new sewage treatment plant (STP) on campus as part of the green initiatives. It is expected that at least 70 per cent of the water from the STP can be used for horticulture purposes on campus.

Many delegations from the Industry, Academia and the Government representatives from several countries visited the Institute to explore the possibilities of mutual interaction.

We would like to acknowledge the support received in abundant measure from the Ministry of Human Resource Development, the various sponsoring agencies, the collaborating industries, institutions and alumni.

I personally acknowledge the support and encouragement I have received from the Chairman and Members of the Board of Governors, and from all my colleagues, and extend my appreciation to the students for their exemplary behaviour and their contributions towards enriching the campus life.

Wish you all the Best.

Jai Hind.

Prof. R.K. Shevgaonkar
Director, Indian Institute of Technology Delhi
Email: director@admin.iitd.ac.in

Our Mission

"

- *To generate new knowledge by engaging in cutting-edge research and to promote academic growth by offering state-of-the-art undergraduate, postgraduate and doctoral programmes.*
- *To identify, based on an informed perception of Indian, regional and global needs, areas of specialization upon which the institute can concentrate.*
- *To undertake collaborative projects which offer opportunities for long-term interaction with academia and industry.*
- *To develop human potential to its fullest extent so that intellectually capable and imaginatively gifted leaders can emerge in a range of professions.*

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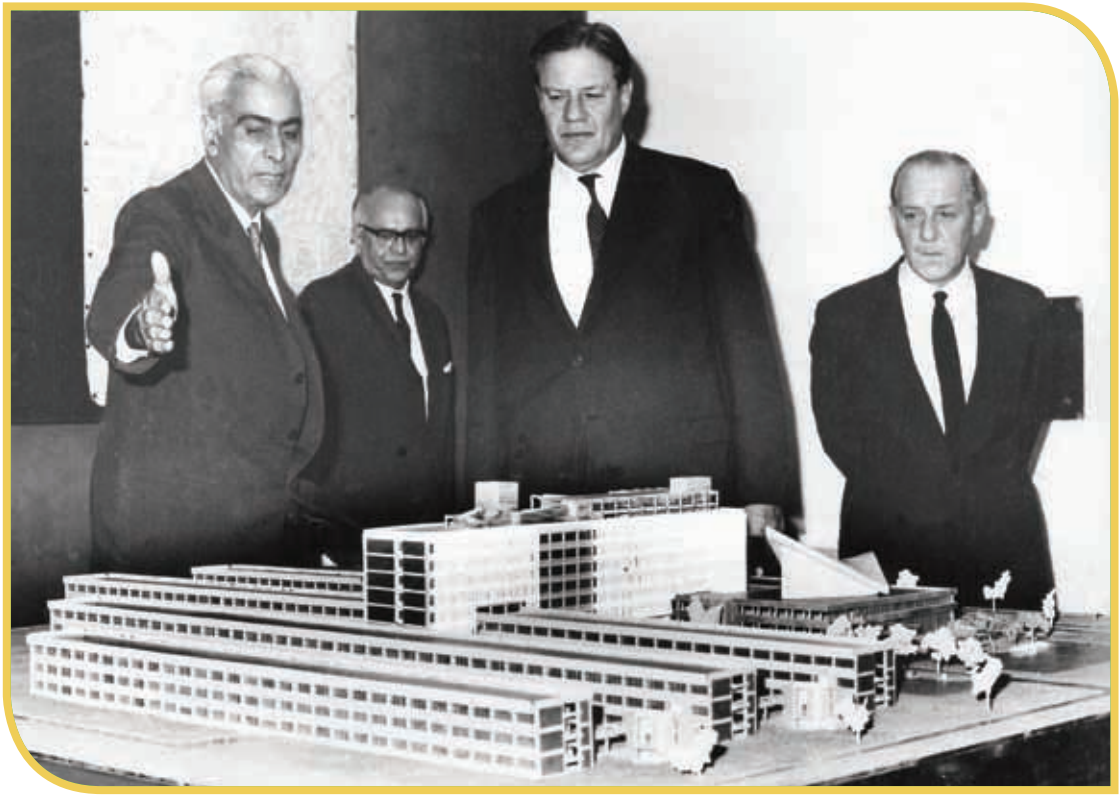
About us

Dreaming big.....



In the formative stages : *Prof. R.N. Dogra, the founding director, IIT Delhi detailing the model of the Institute's building*

HISTORY

The concept of the IITs was first introduced in a report in the year 1945 by Shri. N. M. Sircar, then member of Education on Vicerory's Executive Council. Following his recommendations, the first Indian Institute of Technology was established in the year 1950 in Kharagpur. In his report, Shri Sircar had suggested that such Institutes should also be started in different parts of the country. The Government having accepted these recommendations of the Sircar Committee decided to establish more Institutes of Technology with the assistance of friendly countries who were prepared to help. The first offer of help came from USSR who agreed to collaborate in the establishment of an Institute through UNESCO at Bombay. This was followed by the Institutes of Technology at Madras, Kanpur and Delhi with collaborations with West Germany, USA and UK respectively. Indian Institute of Technology, Guwahati was established in 1995 and the University of Roorkee was converted into an IIT in 2001.

The Institute was later declared an Institute of National Importance under the "Institutes of Technology (Amendment) Act, 1963", re-named as "Indian Institute of Technology Delhi", and accorded the status of a deemed university.

Presently Indian Institute of Technology Delhi is one of the fifteen Institutes of excellence for higher education, research and development in science, engineering and technology and in management in India; the others are at Bhubaneswar, Bombay, Gandhinagar, Guwahati, Hyderabad, Indore, Jodhpur, Kanpur, Kharagpur, Madras, Mandi, Patna, Roorkee and Ropar.

STATUS

Indian Institute of Technology Delhi is an autonomous statutory organisation of the Government of India functioning within the "Institutes of Technology Act, 1961" as amended by the "Institutes of Technology (Amendment) Act, 1963". It is accorded the status of a deemed university with powers to frame its own academic policy, to conduct its own examinations, and to award its own degrees. The fifteen Institutes of Technology are coordinated by an apex body known as IIT Council with the Minister for Human Resource Development of the Government of India as its Chairman.

OBJECTIVES

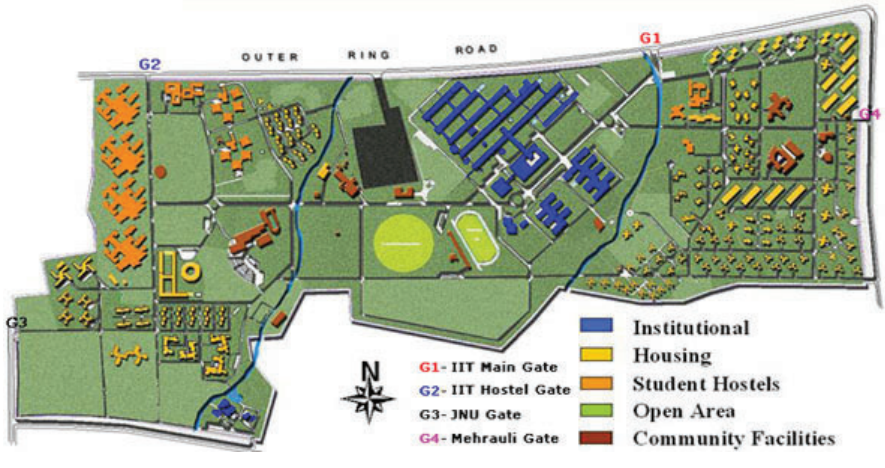
The objectives of the Institute include :

- Offering instruction in applied sciences, engineering and technology, and management at a level comparable to the very best anywhere in the world;
- Providing leadership in curriculum planning, laboratory development and examination system;
- Developing programmes for faculty development both for its own staff and for teachers of other engineering institutions;
- Developing close collaboration with industry through exchange of personnel and undertaking consultancy projects;
- Developing strong collaboration links with other academic and research institutions in the country and abroad;
- Developing a continuing education programme for employed engineers and making it available both on campus and by distance learning techniques at off campus locations;
- Preparing manpower for the unorganised sector and for self-employment.

CAMPUS

The Institute campus extends over an area of 320 acres. Tastefully laid out with the picturesque landscape and with numerous buildings of various types and, with clean and wide roads, the campus presents a spectacle of harmony in architecture and natural beauty. The campus area has been divided into four functional zones:

- Residential zone for students;
- Residential zone for the faculty and other supporting staff;
- Academic zone for academic buildings and workshops; and
- Cultural-cum-social and recreational zone for students.



IIT Delhi Campus Map

The site being longitudinal in shape, the academic and social-cum- cultural zones have been located mid-way between the two residential zones in order to reduce walking distance. The campus provides several essential amenities for community living like hospital, shopping centre, banks, post office, community centre, staff club, students activities centre, stadium and playing fields etc.

BOARD OF GOVERNORS AND ITS COMMITTEES

IIT Delhi is an autonomous organisation of the Government of India. Responsibility for the general superintendence, direction and control of the affairs of the Institute is vested in the Board of Governors. The Board functions through its standing committees — the Finance Committee, the Buildings & Works Committee and other committees which may be constituted to consider specific issues. The composition of the Board of Governors and its standing committees as on March 31, 2014 is as follows:

BOARD OF GOVERNORS

Vijay P. Bhatkar, Chairman
R. K. Shevgaonkar, Director
R.K. Verma
Ashok Misra
Deepak Pental
Patanjali (Patu) G. Keswani
T.V. Ramakrishnan
Anurag Sharma
Ashok Gupta
Rakesh Kumar, Secretary

ADMINISTRATION

The Director is the principal academic and executive officer of the Institute and is responsible for the proper administration of the Institute and for the imparting of instruction and maintenance of discipline therein. He is assisted in his day to day work by Deputy Director(s), Registrar, Deans and senior faculty of the Institute. The senior members of the Administration as on March 31, 2014 are as follows:

ADMINISTRATION

R. K. Shevgaonkar
Director

S.N. Singh
Deputy Director, Operations

S.K. Koul
Deputy Director, Strategy & Planning

Sushil
Dean, Faculty

Ashok Gupta
Dean, Infrastructure

S.K. Gupta
Dean, Student Affairs

Suneet Tuli
Dean, Research & Development

Anurag Sharma
Dean, Academics

Ambuj D. Sagar
Dean, Alumani Affairs & International Programmes

Rakesh Kumar
Registrar

BOARD OF EDUCATIONAL AND RESEARCH PLANNING (BERP)

Board of Educational and Research Planning is the chief planning and policy making body of the institute for its teaching and research activities. Head of the Planning unit is the Member - Secretary of BERP. The planning unit prepared ground work for all the matters to be considered by BERP. The recommendations of BERP are forwarded to the Senate for approval. BERP is also responsible for the short and long term educational and research planning of the institute. The composition of the Board of Educational and Research Planning as on March 31, 2014 is as follows:

BOARD OF EDUCATIONAL AND RESEARCH PLANNING

R.K. Shevgaonkar, Chairman
S.K. Koul, Dy. Director (S&P)
S.N. Singh, Dy. Director (Operations)
Anurag Sharma, Dean (Academics)
Sushil, Dean (Faculty)
Suneet Tuli, Dean (R&D)
S.K. Gupta, Dean (Student Affairs)
Ambuj D. Sagar, Dean (AA&IP)
Ashok Gupta, Dean (Infrastructure)
M. Balakrishnan, Nominee of Senate
A.K. Singh, Nominee of Senate
T.C. Kandpal, Nominee of Senate
Sudipto Mukherjee, Prof.-in-charge (Plng.)

Academic Units at IIT Delhi

(April 1, 2013 - March 31, 2014)

The major academic units of the Institute are the departments, centres and schools. Interdisciplinary research is organized in programmes. The various academic units are listed below. The activities of departments include teaching at all levels and research. The centres focus on interdisciplinary research and some teaching, mostly at the postgraduate level.

Departments

1. Applied Mechanics
2. Biochemical Engineering & Biotechnology
3. Chemical Engineering
4. Chemistry
5. Civil Engineering
6. Computer Science & Engineering
7. Electrical Engineering
8. Humanities & Social Sciences
9. Management Studies
10. Mathematics
11. Mechanical Engineering
12. Physics
13. Textile Technology

Inter-disciplinary Centres

1. Applied Research in Electronics
2. Atmospheric Sciences
3. Biomedical Engineering
4. Energy Studies
5. Industrial Tribology Machine Dynamics & Maintenance
6. Instrument Design & Development Centre
7. Polymer Science & Engineering
8. Rural Development & Technology
9. National Resource Centre for Value Education in Engineering

Schools

1. Bharti School of Telecommunication Technology and Management
2. Amar Nath and Shashi Khosla School of Information Technology
3. Kusuma School of Biological Sciences

IIT Delhi has 13 departments. Each department has its own administration structure with the Head of the Department (HoD) at the top of it. The HoD heads the department for a period of three years after which a new head is appointed. Each department offers a program (at the undergraduate or post-graduate level), some departments such as Mechanical Engineering Department, offer two or more undergraduate level programs and some departments collaborate with each other to offer a joint program. An example of the latter is the M.Tech in Optical Communications program which is offered by the Department of Physics and Department of Electrical Engineering. The DMS (Department of Management Studies), IIT Delhi came into existence in 1993 by an amendment to IIT(D) statutes. The department offers a two year full time MBA programme with focus on Management Systems, a two year full time MBA with focus on Telecommunication Systems Management and a three year part time MBA programme with focus on Technology Management.

An inter-disciplinary center differs from a department in the fact that it deals with an overlap of two or more disciplines of engineering or science. Similar to the departments the centers also offer programs though they offer these courses only at the post-graduation level.

Current Degree Programmes

(April 1, 2013 - March 31, 2014)

The Institute offers undergraduate and postgraduate programmes in a number of areas leading to the degrees of B.Tech./ M.Sc./ M.Tech./ M.S.(R)/ DIIT/ M.Des./ MBA and Ph.D. in Science, Engineering and Technology and Management. The primary objective of these teaching programmes is to offer instruction in applied sciences, engineering and management at a level comparable to the very best anywhere in the world. This is achieved through an undergraduate curriculum which places a strong emphasis on the understanding of fundamental principles rather than specialised knowledge, a postgraduate programme, distinguished by its interdisciplinary approach and emphasis on research.

Pedagogy

Teaching at the Institute incorporates a cohesive, contextual and nurturing environment for learning. The emphasis is on self-motivated learning by using information, experience and practice. The teaching methodology aims at using the inputs from core functional areas to inter-disciplinary issues and problem solving. Students undertake classroom and workshop assignments, conduct field observations, make presentations and participate in group discussions and seminars and are encouraged to develop industry linkages.

Evaluation

The academic year consists of two semesters and a summer term. The education system is organised around a credit system which ensures continuous evaluation of student's performance and provides flexibility to choose courses of interest and to progress at an optimum pace suited to student's ability or convenience. Each course is assigned certain number of credits depending upon the class contact hours. A minimum number of credits and CGPA are to be completed satisfactorily in order to qualify for the award of a degree.

The medium of instruction is English.

Curriculum Development

The Senate of the Institute is constantly engaged in reviewing and approving new courses to improve the curriculum. This year several new minor area programs have been designed with a view to offer a second area of specialization. A major Curriculum Review is now underway and likely to come up for discussion in the Senate very soon.

Under a new Academic Welfare Scheme introduced by the Institute this year for weak students, a special student advisor is identified in each department for students who need special help, at the beginning of each semester. Special extra classes are being conducted for such students and the student advisor closely monitors the attendance and performance of these students and also provides support to help improve their performance.

The undergraduate and postgraduate programmes are managed by their respective Boards, as follows.

BOARD OF ACADEMIC PROGRAMMES (BAP)

Prof. Anurag Sharma	Prof. A. Tripathi	Prof. D.T. Shahani	Mr. Tajveer Singh Sandhu
Prof. S. Roy	Dr. K. Sreenadh	Dr. Ram Lal	Mr. Vishal Ahuja
Dr. Gaurav Goel	Prof. Prashant Mishra	Prof. Sanjeev Sanghi	Mr. Brijesh Singh
Prof. Preeti Ranjan Panda	Dr. Atul Narang	Dr. Nomesh Bolia	Mr. Emroj Hossain
Prof. Amit Kumar	Prof. Puneet Mahajan	Prof. James Gomes	Mr. Divyam Rastogi
Prof. A.K. Gosain	Prof. Siddharth Pandey	Dr. Manav Bhatnagar	Mr. Maheep Singh
Dr. S. Bhalla	Dr. (Ms.) Pritha Chandra	Prof. Prem Kalra	Prof. N. Tandon
Prof. G.S. Visweswaran	Prof. S.S.Yadav	Prof. N.K. Garg	Prof. (Ms.) Veena Chaudhary
Prof. S.D. Joshi	Dr. Krishna Achute Rao	Prof. Kushal Sen	Prof. S. Dharmaraja
Prof. P.V. Rao	Prof. Harpal Singh	Prof. K.S. Rao	Prof. Anshul Kumar
Dr. A.K. Darpe	Dr. K.A. Subramanyan	Prof. Bhim Singh	Prof. V.K. Jain
Prof. Pankaj Srivastava	Prof. Ananjan Basu	Prof. M.R. Ravi	Prof. (Ms.) Geetam Temari
Prof. Neeraj Khare	Dr. V.M. Chariar	Prof. D. Ravi Kumar	Dr. Vivek Raman
Prof. R. Rengasamy	Dr. B.K. Satapathy	Prof. Joby Joseph	
Dr. Dipayan Das	Prof. J. Bijwe	Mr. Arjun Singh Chauhan	

(as on 31.3.2014)

Current Degree Programmes

Below is the list of courses offered currently.

UNDERGRADUATE STUDIES*

Bachelor of Technology [B.Tech.] Duration: 4 years	Dual Degree Programme [B.Tech. and M.Tech.] Duration: 5 years
Chemical Engineering	B.Tech. and M.Tech. in Biochemical Engineering & Biotechnology
Civil Engineering	B.Tech. and M.Tech in Chemical Engineering
Computer Science & Engineering	B.Tech. and M.Tech. in Computer Science & Engineering
Electrical Engineering	B.Tech. and M.Tech. in Mathematics & Computing
Electrical Engineering (Power and Automation)	
Engineering Physics	
Mechanical Engineering	
Production and Industrial Engineering	
Textile Technology	

** Admission to the first year of the four year B.Tech., 5-year dual degree programmes is made through a Joint Entrance Examination (JEE) which is common for all the Indian Institutes of Technology.*

POSTGRADUATE STUDIES & RESEARCH (MASTER)**

M.Sc.	M.Tech.	M.S. (Research)	M.Des.
2 years	**2 years**	**2 years**	**2 years**
1. Chemistry 2. Mathematics 3. Physics	1. Engineering Mechanics 2. Design Engineering 3. Chemical Engineering 4. Molecular Engineering: Chemical Synthesis and Analysis 5. Construction Technology and Management 6. Geotechnical & Geoenvironment Engineering 7. Structural Engineering 8. Water Resources Engineering 9. Construction Engineering and Management 10. Rock Engineering of Underground Structures 11. Environmental Engineering and Management 12. Transportation Engineering 13. Computer Science & Engineering 14. Control and Automation 15. Communications Engineering 16. Power Electronics, Electrical Machines & Drives 17. Computer Technology 18. Integrated Electronics & Circuits 19. Power Systems 20. Computer Applications 21. Thermal Engineering 22. Production Engineering 23. Industrial Engineering 24. Design of Mechanical Equipment 25. Tele-Communication Technology and Management 26. VLSI Tools and Design 27. Radio Frequency Design & Technology 28. Solid State Materials 29. Applied Optics 30. Atmospheric Oceanic Science Technology 31. Fibre Science & Technology 32. Textile Engineering 33. Energy Studies 34. Energy Studies (Evening Programme) 35. Industrial Tribology & Maintenance Engineering 36. Polymer Science & Technology 37. Opto-Electronics & Optical Communication 38. Instrument Technology	1. Information Tech. 2. Bio-chemical Engg. & Bio-technology 3. Chemical Engineering 4. Computer Science & Engineering 5. Electrical Engineering 6. Civil Engineering 7. Mechanical Engineering 8. Telecommunication Technology	1. Industrial Design

contd. ....

POSTGRADUATE STUDIES & RESEARCH (MASTER)**

M.B.A.	MBA	D.I.I.T.	PG Diploma
2 years Full Time	3 years Part Time	1½ years	1 year
1. Management Systems 2. Tele-Communication Systems Management	1. Technology Management	1. Naval Construction	1. Metro Rail Transport: Technology and Management

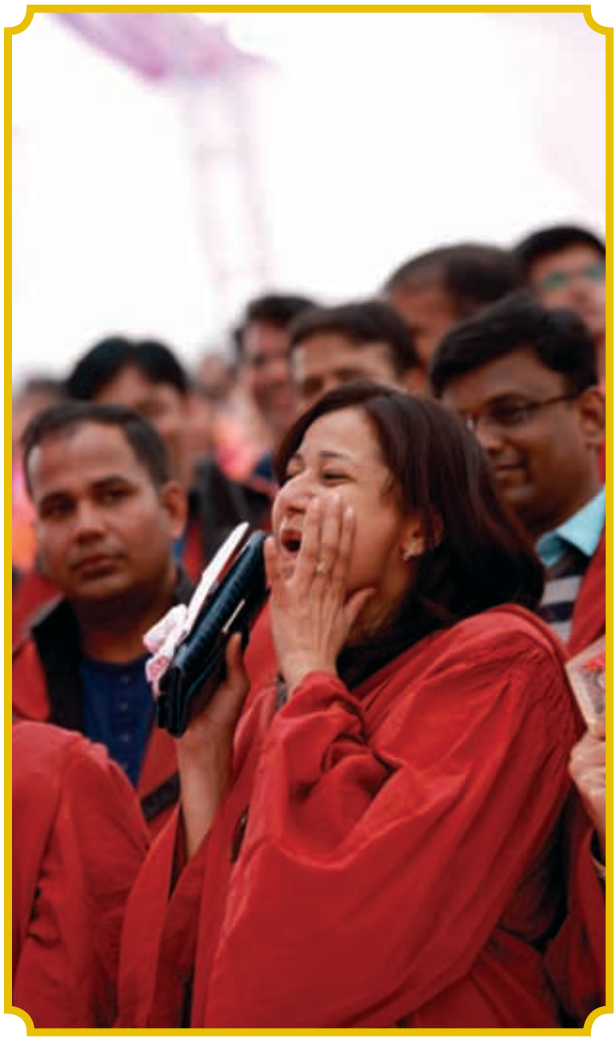
***The admission to full- time M. Tech. programmes is made on the basis of performance in the Graduate Aptitude Test in Engineering (GATE) — an All India entrance test–and interview at the Institute. A limited number of students are also admitted on part-time basis from amongst working professionals alongwith the regular full-time students, subject to their satisfying certain academic and experience requirements. The Institute also offers a special M.Tech. programme (evening) in the field of Energy and Environmental Management on a part-time basis catering to the needs of working professionals from R&D organisations, public sector undertakings, government departments and private industries.*

DOCTORATE PROGRAMMES

The Institute offers research opportunities for doctoral research in all its Departments/ Centres/ Schools. Creative and productive enquiry is the basic concept underlying the research work. In order to overcome any deficiency in the breadth of fundamental training or proper foundation for advanced work, special preliminary or pre-doctoral courses are suggested by each department/centre. The award of Ph.D. is in recognition of high achievements, independent research and application of scientific knowledge to the solution of technical and scientific problems. The Institute lays special emphasis on India-centric research activities. A new Ph. D. programme was started in the School of Biological Sciences of the Institute in this period.

The following Departments/ Centres/ School of the Institute offer the Doctorate programme:

Departments/ Centres/ Schools
Applied Mechanics
Biochemical Engineering & Biotechnology
Chemical Engineering
Chemistry
Civil Engineering
Computer Science & Engineering
Electrical Engineering
Humanities & Social Sciences
Management Studies
Mathematics
Mechnical Engineering
Physics
Textile Technology
Applied Research in Electronics
Atmospheric Sciences
Biomedical Engineering
Energy Studies
Industrial Tribology, Machine Dynamics & Maintenance Engineering
Instrument Design & Development
Polymer Science & Engineering
Rural Development & Technology
National Resource Centre for Value Education in Engineering
Amar Nath and Shashi Khosla School of Information Technology
Bharti School of Telecommunication Technology and Management
Kusuma School of Biological Sciences

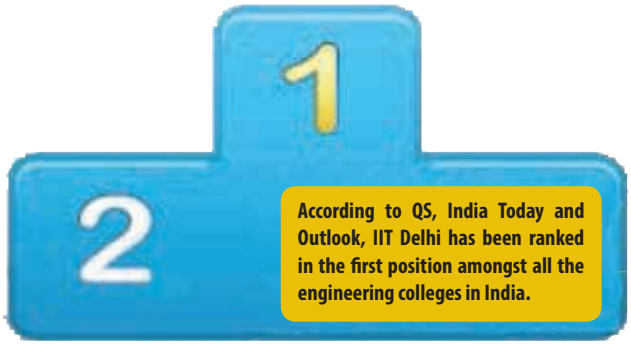


5. Performance Highlights

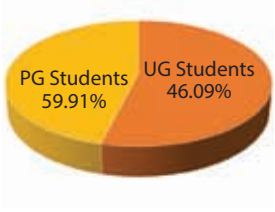
(April 1, 2013 - March 31, 2014)

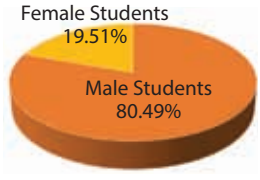
Performance Statistics

(April 1, 2013 - March 31, 2014)



According to QS, India Today and Outlook, IIT Delhi has been ranked in the first position amongst all the engineering colleges in India.





7863 Total students on roll

3624 UG students on roll

1974 Research Scholars on roll

2265 PG students on roll

1534 Female students

78 Foreign students from 9 countries

188 Scholars received the Ph.D. degree

116 Awards/scholarships/medals given at the Undergraduate and Postgraduate level. In addition, the Institute has a "Loan Scholarship Scheme" which makes it more affordable for the students who take loan from banks.

356 Research Scholar Admissions

37 New faculty members joined the institute this year.

1167 PG Admissions

483 Faculty and Academic Staff

853 UG Admissions

815 Non-academic Staff

2376 Total Admissions

104 Faculty fellows under CEP

Performance Statistics

86
Operational MoUs/Agreements with Foreign Institutions/Organisation

63
MoUs/Agreements Indian Institutions/Organizations

2484
Research articles published by the faculty members and researchers of the institute in international journals

1696
Articles indexed in Scopus, an international indexing service in Science & Technology and Social Sciences

21
Books Published by Faculty

35
Titles of E-books added under the Text Book and Book Bank

36
New Courses developed by Faculty

9
QIP/CEP courses

61
Major New Equipments installed

148
Seminars/Conferences

150
New Sponsored Research Projects with a total funding of Rs.68.65 crores.

430
Consultancy Jobs with a total value of Rs.27.31 crores.

40
Miscellaneous Projects worth Rs.5.80 crores.

31
Collaborative Projects/Consultancies with international funding

370
Companies visited for Placement

822
Total Job Offers

752
Total Placements

369 UG Placements

379 PG Placements

4 Ph.D. Placements

Admissions

(April 1, 2013 - March 31, 2014)

Academic programmes at IITD cover a wide range of science and engineering disciplines. IITD's Bachelor's programs, which are the most sought after even on global scales, and for which the entry is through the Joint Entrance Examination, intake has steadily increased for the last few years and during the year 2013-2014, 3,624 UG students were on roll. These figures include 427 women students. The enrolment of postgraduate students during the year 2013-2014 was 4,239. These figures include 1,107 women students. There were 78 foreign students from 9 countries pursuing postgraduate education at the Institute during the year 2013-14. In order to make IIT Delhi more international in character and to make better use of international intellectual resources, administration is constantly working towards increasing the strength of international students and faculty in the campus.

The Ministry of Human Resource Development, Government of India, has emphasized the need to increase the admission of foreign nationals under the self-financing scheme. The Institute has taken necessary steps in this regard and we hope to increase the strength of the foreign nationals in the coming years.

On the recommendation of the Board of Postgraduate Studies & Research, the Senate has approved starting of a Ph.D. program under the National Resource Centre for Value Education in Engineering (NRCVEE) in the areas such as: Philosophy of Values, Professional Ethics, and Interaction of Science, Technology and Human Values.

ADMISSION PROCEDURE

Undergraduate

Admission to all Undergraduate Programmes listed before are made through the Joint Entrance Examination (JEE). The eligibility for appearing for JEE is as follows:

- The minimum academic qualification is the final examination of 10+2 system or its equivalent. The candidates belonging to the general category and OBC must secure a minimum of 60% marks in aggregate in their Qualifying Examination. Candidates belonging to SC, ST and PD categories must secure a minimum of 55% marks in aggregate in the Qualifying Examination. If any Board awards only letter grades without providing an equivalent percentage of marks on the grade sheet, the candidate should obtain a certificate from the Board specifying equivalent marks, and submit it at the time of counseling.

Those appearing in 10+2 final or its equivalent examination may also appear in JEE for consideration of Provisional admission. All provisional admissions stand cancelled if proof of having passed the qualifying examination (10+2 or equivalent) is not submitted before September 30th of the year in which admission is sought.

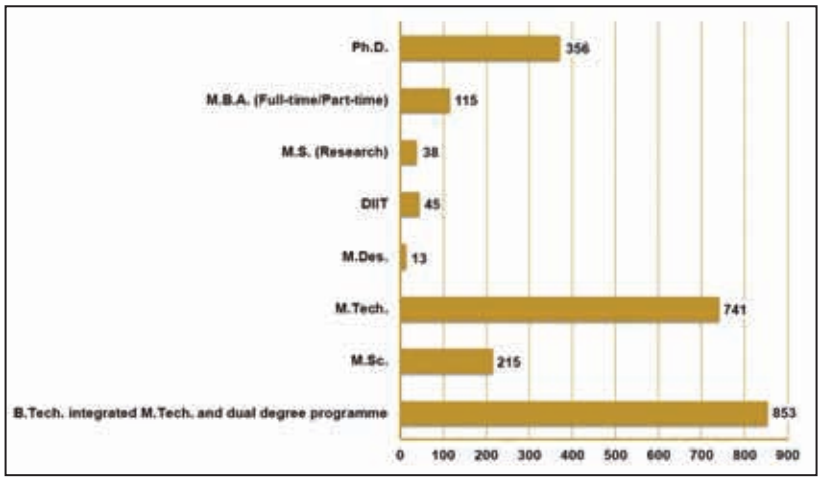
Postgraduate

The admission to full-time M. Tech. programmes is made on the basis of performance in the Graduate Aptitude Test in Engineering (GATE) — an All India entrance test and interview at the Institute. A limited number of students are also admitted on part-time basis from amongst working professionals alongwith the regular full-time students, subject to their satisfying certain academic and experience requirements. The Institute also offers a special M.Tech. programme (evening) in the field of Energy and Environmental Management on a part-time basis catering to the needs of working professionals from R & D organisations, public sector undertakings, government departments and private industries.

Admission to the 2-year M.Des Programme in Industrial Design is made on the basis of CEED (70% weightage) and test/ interview (30% weightage).

All applications are processed by the concerned Department/ Centre/School/Programme and shortlisted applicants are called for a written test and/or interview. The date for test/interview is communicated by the Department/Centre/ Programme. Selected candidates are given offer letters by the Departments/ Centres/Schools after approval of the selection by the Dean, PGS & R. They are required to pay the first installment of fees by a given date, failing which their admission offer stands automatically cancelled. Seats so released are then offered to wait listed candidates.

Graph on the right gives the programme wise details of total number of admissions in 2013-2014.



COURSES AND ADMISSIONS

Following tables (I, II, III) give the details regarding the admissions in the given period in different courses offered at IIT Delhi. Table IV and V shows the total number of students enrolled in different departments and centres. Category wise distribution of students in different programmes is given in Table VII.

Table I : Break-up of Admissions through Joint Entrance Examination during 2013-2014 according to the Various Disciplines

Discipline	Sanctioned Strength	Actual Admissions
B.Tech. in Chemical Engineering	71	71
B.Tech. in Civil Engineering	109	111
B.Tech. in Computer Science & Engineering	63	63
B.Tech. in Electrical Engineering	89	88
B. Tech. in Electrical Engineering (Power and Automation)	32	32
B.Tech. in Mechanical Engineering	103	104
B.Tech. in Production Engineering	48	48
B.Tech. in Engineering Physics	63	63
B.Tech. in Textile Technology	93	94
M.Tech. in Mathematics & Computer Applications (5-year Integrated)	48	48
B.Tech. and M.Tech. in Computer Science & Engineering (5-year Dual Degree)	32	32
B.Tech. and M.Tech. in Chemical Engg. (5-year Dual Degree)	52	50
B.Tech. and M.Tech. in Biochemical Engineering and Biotechnology (5-year dual Degree)	48	48

Table II : Students Admitted to First Year of the M.Tech./M.Des./MS(R)/D.I.I.T., M.B.A. & M.Sc. Programmes as on July 31, 2013 (the last date for late registration in Ist Semester 2013-2014)

Course	Students with Institute Assistantship	Others (including part-timers)	Total
Master of Technology (M.Tech.)			
Department of Applied Mechanics			
Design Engineering	27	—	27
Engineering Mechanics	28	1	29
Department of Chemical Engineering			
Chemical Engineering	31	1	32
Department of Chemistry			
Molecular Engineering: Chemical Synthesis and Analysis	13	—	13
Department of Civil Engineering			
Geotechnical Geoenvironmental Engineering	17	—	17
Structural Engineering	17	1	18
Water Resources Engineering	17	—	17
Rock Engineering Under Ground Structures	18	—	18
Construction Technology & Management	—	27	27
Construction Engineering and Management	27	—	27
Environmental Engineering and Management	18	—	18

Table II, contd.

Transportation Engineering	7	—	7
Department of Computer Science & Engineering			
Computer Science & Engineering	52	—	52
Department of Electrical Engineering			
Integrated Electronics & Circuits	10	—	10
Communications Engineering	13	—	13
Control & Automation	7	1	8
Power Electronics, Electrical Machines & Drives	17	2	19
Computer Technology	14	—	14
Power System	11	1	12
Department of Mechanical Engineering			
Thermal Engineering	20	—	20
Design of Mechanical Equipment	16	1	17
Production Engineering	24	1	25
Industrial Engineering	15	—	15
Department of Physics			
Applied Optics	8	—	8
Solid State Materials	12	—	12
Department of Textile Technology			
Textile Engineering	12	—	12
Fibre Science & Technology	13	—	13
Centre for Applied Research in Electronics			
Radio Frequency Design and Technology	17	—	17
Centre for Atmospheric Sciences			
Atmospheric Oceanic Science Technology	13	—	13
Interdisciplinary Programmes			
Computer Applications	13	—	13
Energy Studies	28	—	28
Industrial Tribology & Maintenance Engineering	14	1	15
Instrument Technology	15	—	15
Polymer Science & Technology	16	—	16
Opto-Electronics & Optical Communication	17	—	17
Tele-communication Technology and Management	18	—	18
VLSI Tools and Design	—	21	21
Total	**615**	**58**	**673**
Master of Design (M.Des.)			
Industrial Design	20	—	20
P.G. Diploma in Metro Rail Transport	—	21	21
Naval Construction	—	20	20
Master of Science (M.Sc.)			
Chemistry	—	—	47
Mathematics	—	—	49
Physics	—	—	44
M.S. (Research)			
Mechanical Engineering	1	—	1
Civil Engineering	—	—	—

Table II, contd.

Applied Mechanics	—	—	—
Amar Nath Shashi Khosla School of Information Technology	1	—	1
Bharti School of Telecommunication Technology	—	—	—
Computer Science & Engineering	—	—	—
Electrical Engineering	1	—	1
Chemical Engineering	—	—	—
Biochemical Engineering & Biotech	4	—	4
M.B.A.			
Full Time	—	48	48
Part Time	—	35	35
Total	**642**	**182**	**964**

Table III : Research Scholars Admitted in both the Semesters of the Session 2013-2014

Department/Centre	I Semester		II Semester		Total
	Institute Supported Scholars	Scholars Supported from Other Sources	Institute Supported Scholars	Scholars Supported from Other Sources	
Applied Mechanics	8	—	3	3	14
Biochemical Engineering & Biotechnology	2	—	1	1	4
Chemical Engineering	4	2	3	5	14
Chemistry	6	8	1	10	25
Civil Engineering	7	3	5	12	27
Computer Science & Engineering	12	—	—	—	12
Electrical Engineering	8	4	12	19	43
Humanities & Social Sciences	1	1	5	4	11
Management Studies	3	3	3	9	18
Mathematics	2	2	1	5	10
Mechanical Engineering	9	1	11	8	29
Physics	17	3	6	8	34
Textile Technology	3	—	—	3	6
Centre for Applied Research in Electronics	—	1	2	—	3
Centre for Atmospheric Sciences	3	—	2	—	5
Centre for Biomedical Engineering	4	—	3	3	10
Centre for Energy Studies	12	9	3	15	39
Industrial Tribology, Machine Dynamics & Maintenance Engineering Centre	1	1	1	1	4
Instrument Design & Development Centre	1	1	1	—	3
Centre for Rural Development & Technology	7	2	1	6	16
Centre for Polymer Science & Engineering	7	1	—	2	10
Amar Nath and Shashi Khosla School of Information Technology	—	—	—	1	1
School of Biological Sciences	2	1	3	1	7
Bharti School of Telecommunication Technology Management	1	—	3	2	6
Transportation Research & Injury Prevention Programmes	1	—	—	2	3
National Resource Centre for Value Education Engineering	—	—	—	2	2
Total	**121**	**43**	**70**	**122**	**356**

Table IV : Total number of M.Tech./MS (R)/M.Sc./D.I.I.T.Students on Rolls as on July 31, 2013 (the last date for late registration in Ist Semester, 2013-2014)

Course	Institute Supported Students	Students Supported from Other Sources	Total
Master of Technology (M.Tech.)			
Department of Applied Mechanics			
Engineering Mechanics	51	1	52
Design Engineering	47	—	47
Department of Chemical Engineering			
Chemical Engineering	46	1	47
Department of Chemistry			
Molecular Engineering Chemical Synthesis and Analysis	23	1	24
Department of Civil Engineering			
Construction Technology & Management	—	—	—
Geotechnical & Geoenvironment Engineering	22	—	22
Rock Engineering Underground Structures	26	—	26
Structural Engineering	22	2	24
Water Resources Engineering	22	—	22
Environmental Engineering and Management	25	—	25
Construction Engineering and Management	41	—	41
Transportation Engineering	11	—	11
Department of Computer Sc. & Engineering			
Computer Science & Engineering	77	—	77
Total	**413**	**5**	**418**
Department of Electrical Engineering			
Integrated Electronics & Circuits	19	—	19
Communication Engineering	20	1	21
Control & Automation	13	1	14
Power Electronics, Electrical Machines & Drives	29	2	31
Computer Technology	28	—	28
Power System	20	2	22
Department of Mechanical Engineering			
Thermal Engineering	34	2	36
Design of Mechanical Equipment	25	1	26
Production Engineering	34	1	35
Industrial Engineering	28	1	29
Department of Physics			
Applied Optics	29	—	29
Solid State Materials	23	—	23
Department of Textile Technology			
Textile Engineering	19	—	19
Fibre Science & Technology	28	—	28
Centre for Atmospheric Sciences			
Atmospheric Oceanic Science & Technology	21	—	21
Centre for Applied Research in Electronics			
Radio Frequency Design and Technology	30	—	30
Total	**400**	**11**	**411**

Table IV, contd.

Interdisciplinary Programmes			
Computer Applications	29	—	29
Energy Studies	45	4	49
Instrument Technology	28	—	28
Industrial Tribology & Maint. Engineering	21	1	22
Polymer Science & Technology	41	—	41
Opto-Electronics & Optical Communication	35	—	35
Tele-Communication Technology and Management	36	—	36
VLSI Design Tools and Technology	9	26	35
Master of Design (M.Des.)			
Industrial Design	40	—	40
Total	**1097**	**47**	**1144**
M.B.A.	—	249	249
M.S. (Research)			
Applied Mechanics	—	3	3
Amar Nath and Shashi Khosla School of Information Technology	2	—	2
Bio-Chemical Engg. & Bio-Technology	6	—	6
Chemical Engineering	1	—	1
Computer Science & Engineering	1	—	1
Civil Engineering	1	—	1
Electrical Engineering	—	—	—
Mechanical Engineering	1	—	1
Bharti School of Telecommunication Technology	4	3	7
Total	**1113**	**302**	**1415**
P.G. Diploma (D.I.I.T.)			
Naval Construction(1½ year)	—	42	42
Metro Rail Transport: Technology and Management (one year)	—	23	23
Master of Science (M.Sc.) (two years)			
Chemistry	—	—	—
Mathematics	—	—	—
Physics	—	—	—
Grand Total	**1113**	**367**	**1480**

Admissions

Table V : Research Scholars on the Institute Rolls as on July 31, 2013 (the last date for late registration in the Ist semester, 2013-2014)

Department/Centre/School	Students with Institute Assistantship	Others (including part-timers)	Total
Amar Nath and Shashi Khosla School of Information Technology	9	1	10
Applied Mechanics	25	5	30
Biochemical Engineering & Biotechnology	13	16	29
Chemical Engineering	35	17	52
Chemistry	14	81	95
Civil Engineering	47	12	59
Computer Science & Engineering	22	5	27
Electrical Engineering	44	16	60
Humanities & Social Sciences	7	8	15
Management Studies	16	11	27
Mathematics	10	24	34
Mechanical Engineering	39	9	48
Physics	42	52	94
Textile Technology	17	4	21
Centre for Applied Research in Electronics	11	6	17
Centre for Atmospheric Sciences	13	9	22
Centre for Biomedical Engineering	9	7	16
Transportation Research and Injury Prevention Programme	4	—	4
Centre for Energy Studies	26	26	52
Industrial Tribology, Machine Dynamics & Maintenance Engineering Centre	3	5	8
Instrument Design & Development Centre	9	3	12
Centre for Polymer Science & Engineering	19	12	31
Centre for Rural Development & Technology	20	5	25
School of Biological Sciences	8	19	27
Bharti School of Telecommunication Technology & Management	17	13	30
Total	**479**	**366**	**845**

Admissions

Table VI : Category and Genderwise distribution of enrolled students in UG and PG courses

Program	General		OBC		SC		ST		PH		Total		Grand Total
P.G.	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	
DIIT	46	5	5	-	6	1	2	-	-	-	59	6	65
M.B.A.	143	36	25	5	21	-	1	-	2	-	192	41	233
M.Des.	14	4	7	-	3	1	3	1	-	-	27	6	33
M.Sc.	106	71	57	22	25	8	7	6	-	-	195	107	302
M.S.R.	63	17	14	-	4	-	1	-	-	-	82	17	99
M.Tech.	825	195	281	40	141	22	26	3	-	-	1273	260	1533
Total P.G.	**1197**	**328**	**389**	**67**	**200**	**32**	**40**	**10**	**2**	-	**1828**	**437**	**2265**
Ph.D.	1009	571	190	57	92	37	8	4	5	1	1304	670	1974
Total (a)	**2206**	**899**	**579**	**124**	**292**	**69**	**48**	**14**	**7**	**1**	**3132**	**1107**	**4239**
B.Tech. (b)	**1568**	**216**	**877**	**79**	**460**	**77**	**235**	**47**	**57**	**8**	**3197**	**427**	**3624**
Total (a+b)	**3774**	**1115**	**1456**	**203**	**752**	**146**	**283**	**61**	**64**	**9**	**6329**	**1534**	**7863**

(as on November 2013)

Academic Performance

(April 1, 2013 - March 31, 2014)

All the IITs follow the credits system of performance evaluation, with proportional weighting of courses based on their importance. The total marks (usually out of 100) form the basis of grades, with a grade value (out of 10) assigned to a range of marks. Sometimes, relative grading is done considering the overall performance of the whole class.

1813 candidates awarded of various degrees of the Institute at the 44th Annual Convocation held in November 2013. Details of the same are given in the following graph and Tables I, II and III.

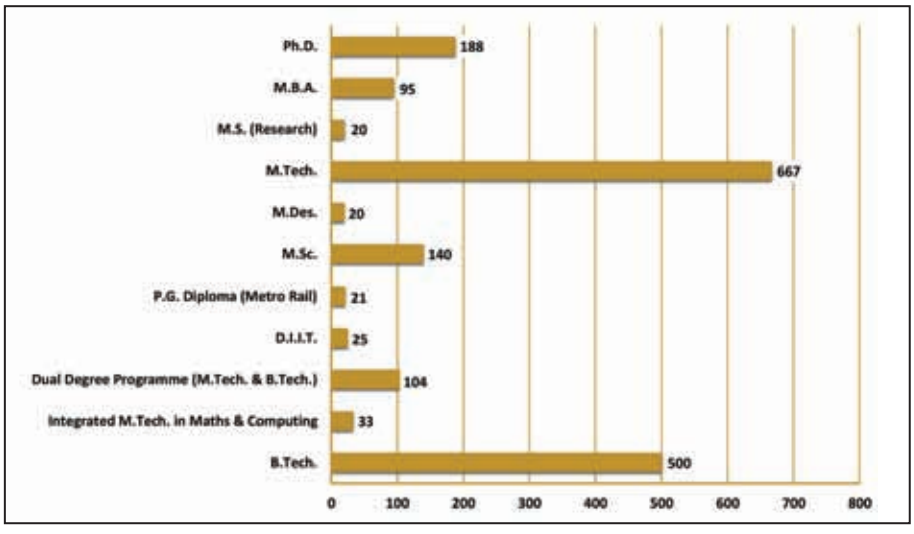


Table I : Number of Undergraduate Students Graduated/Degree Awarded in Convocation 2013

Discipline	No. of Students Passed
5 Year Dual Degree/ Integrated	
B.Tech. in Biochemical Engineering & Biotechnology and M.Tech. in Biochemical Engineering & Biotechnology	29
B.Tech. and M. Tech in Chemical Engineering	32
B.Tech. in Chemical Engineering and M.Tech. in Process Engineering and Design	2
B.Tech. in Computer Science & Engineering and M.Tech. in Computer Science & Engineering	21
B.Tech in Electrical Engineering and M.Tech in Information and communication	20
M.Tech. in Mathematics and Computing	33
B.Tech. Degree	
Civil Engineering	78
Chemical Engineering	59
Computer Science & Engineering	52
Electrical Engineering	53
Electrical Engineering (Power)	26
Machanical Engineering	85
Production and Industrial Engineering	42
Engineering Physics	47
Textile Technology	58
Total	**637**

Table II : Number of Students Awarded of Degrees/Diplomas in 2013

	Programme	No. of Degrees Awarded	No. of Diplomas Awarded
(a)	**M.Tech.**		
	Engineering Mechanics	24	—
	Design Engineering	23	—
	Molecular Engineering: Chemical Synthesis	10	—
	Chemical Engineering	14	—
	Construction Technology & Management	26	—
	Geotechnical and Geoenvironmental Engineering	10	—
	Structural Engineering	19	—
	Water Resources Engineering	9	—
	Rock Engineering & Underground Structures	9	—
	Construction Engineering and Management	25	—
	Environmental Engineering and Management	8	—
	Transportation Engineering	7	—
	Computer Science & Engineering	35	—
	Control and Automation	8	—
	Communications Engineering	12	—
	Power Electronics, Electrical Machines & Drives	20	—
	Computer Technology	18	—
	Integrated Electronics & Circuits	15	—
	Power Systems	12	—
	Computer Applications	19	—
	Thermal Engineering	18	1
	Production Engineering	19	—
	Industrial Engineering	21	—
	Energy and Environmental Management (Evening)	38	1
	Ocean Sciences and Technology	11	—
	Instrument Technology	15	—
	Design of Mechanical Equipment	12	—
	Applied Optics	22	—
	Solid State Materials	20	—
	Fibre Science & Technology	15	—
	Textile Engineering	8	—
	Radio Frequency Design and Technology	27	—
	Energy Studies	25	—
	Industrial Tribology & Maintenance Engineering	11	—
	Polymer Science & Technology	25	—
	Opto-Electronics & Optical Communication	23	—
	VLS M.Tech. VLSI Design Tools and Technology	14	1
	Telecommunication Technology and Mangement	20	—
(b)	**MBA**		
	Management Systems	37	—
	Technology Management	44	—
	Telecommunication System Management	13	—
(c)	**D.I.I.T. (2-Year)**		
	Naval Construction	—	22
(d)	**P.G. Diploma in Metro Rail Transport : Technology & Management**	—	**21**
(e)	**M.Sc.**	**140**	—
(f)	**M.Des.**	**20**	—
(g)	**M.S. (Research)**		—
	Computer Science	1	—
	Chemical Engineering	1	—
	Amarnath & Shashi Khosla School of Information Technology	6	—
	BioChemical Engineering	4	—
	Mechanical Engineering	1	—
	Applied Mechanics	—	—
	Electrical Engineering	6	—
	Telecommunication Technology and Mangement	1	—
	Total	**941**	**46**

Table III : Number of Ph.D. Degrees Awarded in 2013

Department/Centre	No.of Degrees Awarded
Applied Mechanics	4
Bio-chemical Engineering & Bio-technology	4
Chemical Engineering	5
Chemistry	9
Civil Engineering	14
Computer Science & Engineering	4
Electrical Engineering	23
Humanities & Social Sciences	9
Management Studies	8
Mathematics	5
Mechanical Engineering	12
Physics	21
Textile Technology	7
Applied Research in Electronics	5
Centre for Bio-medical Engineering	4
Centre for Energy Studies	6
Industrial Tribology, Machine Dynamics & Maintenance Engineering Centre	8
Instrument Design & Development Centre	19
Centre for Polymer Science & Engineering	2
Centre for Rural Development & Technology	3
Amarnath and Shashi Khosla School of IT	1
Computer Applications (JCA)	14
Telecommunication Technology and Management (JTM)	1
Total	**188**

Academic Performance

For each semester, the students are graded on a scale of 0 to 10 based on their performance, by taking a weighted average of the grade points from all the courses, with their respective credit points. Each semester evaluation is done independently and then the weighted average over all semesters is used to calculate the cumulative grade point average (known as CGPA or CPI—Cumulative Performance Index). The following table gives the Discipline-wise break-up of CGPA for the two Academic Semesters:

Table IV: Discipline-wise break-up of CGPA for the two Academic Semesters (Undergraduate Courses) (Academic Session 2012-2013 (2009 Entry Students)]

Discipline	10.00- 9.00	8.99-8.00	7.99-7.00	6.99-6.00	5.99-5.00	4.99-4.00	3.99-3.00	2.99-2.00	Less than 2.00	Total
First Semester										
Dual-Degree in Biochemical Engineering & Biotechnology (BB5)*	3	9	6	9	5	0	0	0	0	32
Civil Engineering (CE1)	2	13	35	19	12	3	0	0	0	84
Chemical Engineering (CH1)	3	21	15	12	10	2	0	0	0	63
Dual Degree in Chemical Engineering (CH7)	0	11	10	13	7	0	0	0	0	41
Computer Science & Engineering (CS1)	17	13	10	8	3	0	0	0	0	51
Dual-Degree in Computer Science & Engineering (CS5)	2	10	10	3	4	0	0	0	0	29
Electrical Engineering (EE1)	3	17	18	13	6	0	0	0	0	57
Electrical Engineering (Power) (EE2)	3	6	7	8	2	0	0	0	0	26
Electrical Engineering (EE5)	0	6	9	8	0	0	0	0	0	23
Mechanical Engineering (ME1)	10	23	26	19	10	1	0	0	0	89
Mechanical Engineering (ME2)	0	16	12	7	4	0	0	0	1	40
Mathematics and Computing (MT5)	1	9	11	8	8	1	0	0	0	38
Engineering Physics (PH1)	2	10	18	14	4	0	0	0	0	48
Textile Engineering (TT1)	1	12	18	18	12	8	0	0	0	69
Total	**47**	**176**	**205**	**159**	**87**	**15**	**0**	**0**	**1**	**690**
Second Semester										
Dual-Degree in Biochemical Engineering & Biotechnology (BB5)	3	9	6	9	4	1	0	0	0	32
Civil Engineering (CE1)	2	15	31	24	10	1	0	0	0	83
Chemical Engineering (CH1)	3	21	16	12	9	2	0	0	0	63
Dual-Degree in Chemical Engineering (CH7)	0	11	12	12	6	0	0	0	0	41
Computer Science & Engineering (CS1)	17	15	10	7	4	0	0	0	1	54
Dual-Degree in Computer Science & Engineering (CS5)	2	10	11	2	4	0	0	0	0	29
Electrical Engineering (EE1)	2	20	17	12	6	0	0	0	0	57
Electrical Engineering (EE2)	3	7	6	9	1	0	0	0	0	26
Electrical Engineering (EE5)	0	6	9	8	0	0	0	0	0	23
Mechanical Engineering (ME1)	10	23	26	20	9	1	0	0	0	89
Mechanical Engineering (ME2)	0	18	10	7	4	0	0	0	0	39
Mathematics and Computing (MT5)	1	9	10	9	8	1	0	0	0	38
Engineering Physics (PH1)	2	11	15	15	6	0	0	0	0	49
Textile Engineering (TT1)	0	12	19	19	11	8	0	0	0	69
Total	**45**	**187**	**198**	**165**	**82**	**14**	**0**	**0**	**1**	**692**

Academic Performance

Table V : Academic Performance of 1st year Students of Postgraduate Programmes

	Programme	No. of students admitted (2013)	No. of students qualified to continue*
(a)	**M.Tech.**		
	Engineering Mechanics	29	29
	Design Engineering	27	27
	Chemical Engineering	32	31
	Molecular Engineering: Chemical Synthesis and Analysis	13	13
	Construction Technology and Management	27	27
	Geotechnical & Geoenvironment Engineering	17	16
	Structural Engineering	18	18
	Water Resources Engineering	17	17
	Construction Engineering and Management	27	27
	Rock Engineering of Underground Structures	18	18
	Environmental Engineering and Management	18	17
	Transportation Engineering	7	7
	Computer Science & Engineering	52	51
	Control and Automation	8	8
	Communications Engineering	13	13
	Power Electronics, Electrical Machines & Drives	19	19
	Computer Technology	14	14
	Integrated Electronics & Circuits	10	9
	Power Systems	12	12
	Computer Applications	13	13
	Thermal Engineering	20	19
	Production Engineering	25	25
	Industrial Engineering	15	15
	Design of Mechanical Equipment	17	17
	Telecommunication Technology and Management	18	17
	VLSI Tools and Design	21	21
	Radio Frequency Design & Technology	17	17
	Solid State Materials	12	12
	Applied Optics	8	8
	Atmospheric Oceanic Science Technology	13	13
	Fibre Science & Technology	13	12
	Textile Engineering	12	12
	Energy Studies	28	28
	Industrial Tribology & Maintenance Engineering	15	15
	Polymer Science & Technology	16	16
	Opto-Electronics & Optical Communication	17	16
	Instrument Technology	15	15
(b)	**M.S. (Research)**		
	Amar Nath & Shashi Khosla School of In formation Technology	1	1

contd.

	Mechanical Engineering	1	1
	Electrical Engineering	1	1
(c)	**M.Des.**		
	Industrial Design	20	20
(d)	**D.I.I.T. (2 year)**		
	Naval Construction	20	20
(e)	**One year P.G. Diploma in Metro Rail Transport: Technology and Management**	**21**	**21**
(f)	**M.Sc.**		
	Chemistry	47	47
	Mathematics	49	48
	Physics	44	44
	Management Studies		
	M.B.A. Programme (Full-time)	48	48
	M.B.A. Programme (Part-time)	35	35
	Total	**960**	**950**

**The remaining students either left the Institute or failed to meet the minimum C.G.P.A. requirements to continue in the next semester.*

Internship and Placement

(April 1, 2013 - March 31, 2014)

Training & Placement activities are guided by an Institute Level Committee consisting of Faculty members and students. The student committees, i.e. Central Committee at the Institute level as well as Nucleus Committees at departmental level, actively participated in the Training & Placement activities.

As in the past the Training and Placement Unit continued to plan, organise and consolidate the Training and Placement activities for students. It actively interacted with various industrial, technical, management and research organisations in the country. The dual aim of establishing this rapport is to ensure that students are given adequate technical exposure/industrial training during their pre-final year and subsequently get employment in organisations which match their aspirations and objectives.

As in the previous years, web based placement services were provided using the internal T&P server this year as well. The students got all information on their desktops PCs / laptops, they applied on-line and could see the progress of their application including the final results. The companies too were issued user name and password for accessing and short-listing CVs and uploading their presentations and files. This considerably reduced the conventional pre-placement talks on the campus.

The analysis of the past training and placement activities was presented to the students to help them decide their future course of action. Constant liaison with industries was maintained throughout the year to ensure student placements across sectors.

This office also organised some pre-placement workshops, panel discussions and career counselling talks by distinguished persons from reputed technical, industrial, management and research organisations for the benefit of the graduating students. Some of the Institute alumni who are holding very senior positions in private and public sector organisations were also invited to share their personal experiences with the student community of the Institute.

An online interview preparation personality development & career guidance system was also made available to all students of the institute.

Internship

A personal dialogue with top executives of a large number of industries resulted in better understanding of their functional requirements and training activities. This effort also helped the T&P Unit in the effective planning of summer practical training for 3rd year B.Tech./Dual degree/Integrated M.Tech. students, besides obtaining a good number of stipends and other facilities such as transport, accommodation, etc.

The T&P unit with the active cooperation of Nucleus Committees of the departments was able to arrange more than the required number of seats for internships. Stipends were committed for 358 students and other perquisites for 209 students. Detailed instructions to students were also issued prior to the commencement of the training programme. A list of data regarding the pre-final year students training is given in Table-I.

Placement

A letter of invitation for Campus Interviews was sent to a large number of public or private sector organisations especially to those which visited the Institute for campus interviews during the last three years. A large number of them gave electronic copies of their job profiles which were made available to the students through the internal web server. This vigorous drive resulted in requisitions being obtained from industries from 370 Companies for 466 profiles with selections on 228 profiles as a result of which 752 students were placed making a total of 822 jobs (some students got multiple jobs). The sector-wise distribution of profiles opened for placement are given in Table II.

Table II- Sector -wise distribution of Profiles Opened for Placement

Sector	Profiles Opened	Students Placed
Analytics	30	99
Consulting	40	79
Core (Technical)	157	258
Finance	17	30
Information Technology	138	205
Management	04	03
Other	44	36
Teaching & Research	36	42
Total	**466**	**752**

Ground rules for placement evolved in consultation with the students and faculty members led to a just and equitable distribution of job opportunities amongst the student community.

The discipline wise beak-up of on campus placement position is shown in Table III and IV.

Table 1 - 3rd Year Students Summer Training - 2014

Discipline	Seats- Obtained	Seats- Required	Stipend	Other Facilities
(a) B. Tech/Dual Degree				
Chemical Engineering/Dual Degree	117	115	32	15
Computer Science & Engineering/Dual Degree	91	94	71	50
Civil Engineering	99	102	25	11
Electrical Engg/Power/Dual Degree	123	122	94	46
Engineering Physics	54	53	17	11
Mechanical Engineering	105	107	51	40
Industrial & Production Engineering	48	49	10	10
Textile Technology	85	84	16	10
(b) 5-Year Integrated M.Tech. Programme				
Bio-Chemical Engineering & Bio-Tech	42	32	13	8
Math & Computer Application	37	36	29	8
Total	**801**	**794**	**358**	**209**

Table III : Discipline-wise break-up of On-Campus Placement Position of B.Tech./Dual and 5-year integrated M. Tech. Students during 2013-14

Discipline	No. of Students Registered	No.of Effective Placements*	No.of Students with more than one job**
(a) B.Tech			
Chemical Engineering	60	47	01
Civil Engineering	71	37	01
Computer Science & Engineering	55	55	15
Electrical Engineering	56	52	08
Electrical Engineering (Power)	27	21	01
Mechanical Engineering	81	62	04
Industrial & Production Engineering	35	29	
Textile Technology	52	42	01
Physics Engineering	31	24	
(b) Dual / 5-Year Integrated M. Tech Programmes			
Mathematics & Computer Appn.	31	25	02
Bio-chemical Engineering & Bio. Tech.	25	19	02
Chemical Engineering Dual	38	34	01
Computer Science & Engineering Dual (CO)	30	30	10
Electrical Dual (EI)	19	14	01
Total	**611**	**491**	**47**

**Others would have obtained jobs via off-campus mode or opted for higher studies or for Civil Services.*

***This is because more than one company declared the results on the same day.*

Table IV : On-campus Placement Position of M.Tech. Students during 2013-14.

Department/ Interdiscip. Programme	No. of Students Registered	No.of Effective Placements*	No.of students with More than** one job
M.Tech.			
Applied Mechanics	42	25	
Atmospheric Oceanic Science	08	06	
Chemical Engineering	24	09	
Molecular Engineering/Chemical Synthesis	01	01	
Civil Engineering	39	11	
Computer Science & Engineering	45	45	07
Electrical Engineering	57	34	01
Computer Application (Maths)	13	12	
Mechanical Engineering	26	15	
Physics	02		
Textile Technology	21	09	
Energy Studies	18	08	
ITMMEC	08	02	
Opto-Electronics and Communication	14	05	
Polymer Science & Technology	08	01	
Instrument Technology	12	09	
VLSI	15	15	
CRF (Care)	10	04	
Tele Communications	15	13	02
Total	**378**	**224**	**10**

In addition 16 M. Des., 16 M.Sc., 01 MS Research, and 04 Ph.D. students also were placed through our campus activities. MBA students did their placement separately.

**Others have got placement via off-campus mode. Some would have gone for higher studies or for Civil Services.*

***This is because more than one company declared the results on the same day.*

Total Jobs = B.Tech. & Dual + M.Tech. + M. Des. + M.Sc. + MS Res. + Ph.D. = 491+224+16+16+1+4 =752

Staff Training Programmes

(April 1, 2013 - March 31, 2014)

The Institute continues to take particular care of its staff so that they are properly equipped with the skill/knowledge that is required to keep pace with the developments taking place in both administrative and technical spheres. It deputes its technical, secretarial and ministerial staff to various training institutions in and outside Delhi. During the year under report 178 staff members/officers belonging to administrative and technical cadres were deputed/sponsored for training outside the Institute. Details are as follows :

Staff Training Programmes

Table I : Group A Officers Deputed for Various Staff Training Programmes in 2013-2014

Title of Training	Period of Training	Name / Group
Workshop on "Noting & Drafting"	20/05/2013 to 21/05/2013	Sh. Ramesh Kumar
Workshop on "Brihaspathi Accounting Software"	14/12/2013 to 15/12/2013	Sh. K. Narayanan Sh. M.K. Gulati Sh. R.K. Gupta
Workshop on "Analysis of Financial Statement (WAFS-2)"	20/02/2014 to 21/02/2014	Mohd. Shamim Sh. K.L. Guray Sh. Ram Nath Sh. Anup Kuksal
Workshop on "Right to Information Act -2005"	10/03/2014 to 11/03/2014	Sh. N.C. Chauhan Sh. N. Bhaskar
Workshop on "Ethics & Value in Public Governance (WoEVIPG-03)"	18/03/2014 to 20/03/2014	Sh. M.K. Gulati Sh. Mukesh Kumar Sh. Suresh Kr. Gohar

Scholarships, Assistantships and Awards

(April 1, 2013 - March 31, 2014)

The Institute believes in the maxim that no deserving student, however weak in financial backing, should be denied the opportunity of education at IIT Delhi. To encourage and to provide financial incentives to meritorious students and assistance to the needy students of the institute, individuals, trusts and organisations have been instituting scholarships, awards, etc. at the Institute. At present, there are 116 awards/scholarships/medals being given at the Undergraduate and Postgraduate level. This is in addition to more than 1541 awards instituted by the Institute directly in the form of merit-cum-means scholarships, cash prizes and freeships.

In addition, the Institute has a "Loan Scholarship Scheme" which makes it more affordable for the students who take loan from banks. Additional Medals, Awards, Fellowships and Scholarships instituted during the previous year include Sadashiv Shankar Gokhale Scholarship, Akshat Gupta Scholarship, Shri Beni Madho Singh Scholarship, Koul Basu Research Award, Prof. P.K. Katti Award, NRCVEE Best Project and Essay Award, Punita and Jayant Sinha Awards and Shri O.P. Bansal Cash Award, etc.

Below is a summary of cash prizes and merit-cum means scholarships offered to B.Tech students during the session 2013-2014.

Scholarships / Assistantships / Freeships and Awards

Table I : Number of Cash Prizes Merit-cum-Means Scholarships/Freeships offered to B.Tech. Students during the Session 2013-2014

Class	Cash Prizes	No. of Scholarships Awarded	Free Mess Services (basic menu and pocket allowance of Rs 250/- p.m. to S.C./S.T. students)	Freeships for Gen & OBC (w.e.f 2010)
I-Year	62	213	80	57
II-Year	115	162	71	64
III-Year	87	139	62	59
IV-Year	92	157	59	49
V-Year	33	–	–	–
Backlog	6	1	36	2
Total	**395**	**672**	**308**	**231**

Table II : Assistantships to Dual Degree Students during the Session 2013-2014

Course	No. of Assistantships Renewed	No. of Assistantships Awarded
Bio-chemical Engg. & Bio-Tech.	19	23
Computer Science & Engineering	22	25
Electrical Engineering	17	18
Chemical Engineering	24	24
Mathematics and Computing	15	23
Total	**97**	**113**

Scholarships, Assistantships and Awards

Students pursuing M.Tech./ M.Des/ MS (R) are eligible for institute assistantship at the time of admission. However, for continuation of the assistantship they have to maintain a minimum SGPA (semester grade point average) at the end of every semester. The table below shows the assistantship awarded to 2013 entry students and renewed to the existing students. A total of 649 students were awarded assistantship in 2013-14

Table III: Assistantships Offered to the Students of M.Tech., M.Des., MS(R) and M.Sc. Programmes during the Session 2013-2014.

(i) M.Tech./M.Des.		
Course	**No. of Assistantships Renewed**	**No. of Assistantships Awarded**
(a) M.Tech.		
Engineering Mechanics	25	27
Design Engineering	24	29
Chemical Engineering	25	32
Molecular Engineering : Chemical Synthesis & Analysis	10	13
Geotechnical and Geoenvironmental Engineering	5	17
Structural Engineering	8	18
Construction Engineering and Management	—	27
Environmental Engineering and Management	7	18
Rock Engg. and Underground Structures	8	18
Water Resources Engineering	5	17
Transportation Engineering	4	7
Computer Science & Engineering	25	52
Power Electronics, Electrical Machines & Drives	12	19
Communications Engineering	8	13
Control and Automation	9	8
Computer Technology	14	14
Power System	10	12
Integrated Electronics & Circuits	9	10
Computer Applications	9	13
Thermal Engineering	16	20
Production Engineering	10	25
Industrial Engineering	14	15
Design of Mechanical Equipment	9	17
Applied Optics	21	8
Solid State Materials	11	12
Textile Engineering	7	12
Fibre Science & Technology	15	13
Atmospheric-Oceanic Science & Technology	8	13
Radio Frequency Design and Technology	13	17
Energy Studies	21	28
Industrial Tribology & Maintenance Engineering	7	15

contd. .....

Polymer Science & Technology	25	16
Opto-electronics & Optical Communication	18	17
Instrument Technology	13	15
Telecommunication Technology and Management	18	18
(b) M.Des.		
Industrial Design	20	20
(c) MS (Research)		
Bio-chemical Engg. & Bio-Tech.	2	4
Bharti School of Telecommunication Technology & Management	—	—
Amar Nath & Shashi Khosla School of Information Technology	2	—
Computer Science & Engineering	1	—
Civil Engineering	1	—
Chemical Engineering	1	—
Total	**470**	**649**

List of the merit-cum-means scholarships awarded for MSc is as follows:

Table IV : Merit-cum-means Scholarships Awarded to MSc. Students

		2012	2013
Chemistry	I Year	19	14
	II Year	19	14
Mathematics	I Year	10	14
	II Year	10	14
Physics	I Year	22	14
	II Year	22	14
Total		**102**	**84**

Other than these, fifteen M.Tech. students of the Institute had gone to Germany under the DAAD Scholarship Scheme to do part of their thesis research under the Indo-German collaboration program. The 12th batch of 20 students for this year has been selected and they departed on September 2013.

Student's Awards/ Achievements

Department of Chemical Engineering

- Kishore Kondamudi and Dr. Sreedevi U., SRISTI Gandhian Young Technological Innovation Award (GYTI) 2013 under the category MLM (more from less for many) for Reactor & Catalyst Development for Oxygen evolving step in Sulfur Iodine cycle for Hydrogen production
- "Conference Best Paper Award "for Dr. V. Ramsagar & Dr. Munawar Shaik paper in International Conference on Chemical and Bioprocess-India (ICCBPE-IN) Nov. 2013
- Dr. Sanat Mohanty, Special Mentor : Vivek Kumar- GANDHI YOUNG SCIENTIST
- Special Mentor: Rahul Mishra – IIChE – 2nd Best Paper @ IICT Conf. Bombay (Dr. Sanat Mohanty)
- Kriti Mahajan, Ritubhan Gautam (Dual Degree 5th year), Student received 'Honeywell Innovation Award'
- Loveleen Sharma, Best Paper (First Prize) at Chemlon 2013 (held in ICT, Mumbai) in category "Novel Reactors and Operating strategies". Supervisor – Prof. S. Roy and Prof. K.D.P. Nigam
- Meenakshi Majumdar, Best paper (First Prize) at Chemcon 2013 (held in ICT, Mumbai) in category, "Fluid Mechanics and CFD" Supervisor – Prof. S. Roy

Scholarships, Assistantships and Awards

Department of Civil Engineering

- Kaustav Sarkar and B. Bhattacharjee. Analysis of Moisture Ingress in Concrete Subjected to Rainfall Exposure in a Composite Tropical Climate. (2013): Adjudged as best paper in Proceedings of the 5th Asia and Pacific Young Researchers and Graduates Symposium on Current Challenges in Structural Engineering (YRGS 2013).
- Mr. and Mrs. Prem Sheel Bhatnagar Memorial Award for Best B.Tech Project (G. Shilpa, 2013)
- Deutscher Akademischer Austausch Dienst (DAAD) award to Sameer Khan for Masters sandwich program in the Rheinisch-Westfälische Technische Hochschule Aachen (RWTH Aachen University) with Prof. Dr. Benno Hoffmeister. (2013).
- Apekshit Solanki; Sameera; Vishakha Shankar IIT Delhi-Alumni Award at I2Tech-Open House 2013 (2nd position with cash prize of INR 10,000.00 in undergraduate category) (2013).
- Apekshit Solanki; Sameera; Vishakha Shankar IITD class of 89: SPS Memorial Award with seed money of INR 50,000.00 (2013).
- Apekshit Solanki; Sameera; Vishakha Shankar 2nd position in Civil Engineering Society awards among CEP200 projects category (2013).
- Vikash Kumar, Summer Undergraduate Research Award by IIT Delhi (2013).

Department of Computer Science & Engineering

- Chirag Jainwon the first prize for project awards under the Undergraduate category during IIT Delhi's Open House 2014, for his work on an Improved Algorithm for Sequence Alignment on GPUs.
- Deeksha Gautam, Sudhanshu Shekhar, Madhulika Mohanty, Nitish Varshney won Grand Prize for "Polarizer" which classifies controversial comments into pro and con at the event - Yahoo HackU, 2013.
- Ankit Kumar, Dhruv Gupta and Pulkit Sapra of the ASSISTECH group have bagged the best project award for developing affordable Refreshable Braille Cells at TechTop 2014, a national innovation contest.

Department of Electrical Engineering

- Chetna Singhal (2011BSZ8071) - Best poster paper award on the Institute Research Day.
- Best paper presentation award to the following research paper: Prabhmandeep Kaur, V.K.Jain and Subrat Kar, "Performance of free space optical links under various weather conditions and optical turbulence", International Conference on Emerging Technologies in Electronics & Communication (ICETEC-13), GNDU Amritsar, India, 20-22 December 2013.
- R. Prashant (2010EEZ8051) - Shortlisted for best paper award in BRAIN sponsored by Institute for Engineering in Medicine.

Department of Physics

- Best Poster Award: Strain induced buckled super-hydrophobic PDMS silver nanorods arrays, Pratibha goel, Samir Kumar, J. P. Singh at MRS Fall meeting & exhibit, Boston, USA (1-6/12/2013)
- Best Poster Award (by IITD Alumni Association): 'Exchange Bias Effect in Antiferromagnetic (AF)/Ferromagnetic (FM) Systems for Spintronics' to Himanshu Fulara, Sujeet Chaudhary and S C Kashyap, at 12Tech – 2013, IIT Delhi (India) (27/4/2013).
- Runners-up best project (Alumni Association Award): High-resolution, non-contact quantitative phase imaging of biological objects to Vishal Srivastava and D. S. Mehta at Open House (27/4/ 2013).
- Best Poster Paper Award (WRAP 2013): High-resolution corneal topography and tomography of fish eye using full-field white light interference microscopy and colour fringe analysis to Vishal Srivastava, M. Inam, Brijesh Kumar Singh, and D. S. Mehta at Workshop on Recent Advances in Photonics, IIT Delhi, India (17-18/12/2013).
- Best Poster Award: 'Role of Bimodal Distribution in tailoring the inter-particle Interactions in Cu79Co21 Nanogranular films, to Dinesh Kumar, Sujeet Chaudhary, D K Pandya at 58th DAE Solid State Physics Symposium, Patiala (India) (17-21/12/ 2013)

Department of Textile Technology

- Upashana Chatterjee, Predicting Changes in TPU coating properties with weathering , Poster Award, International Conference PPS2013 Mumbai.
- Rashmi Thakur, APA Innovation Award – 2014, Design of a novel baby diaper.

Centre for Applied Research in Electronics

- Sanyal (M.Tech. 2009), IETE-M N SAHA MEMORIAL AWARD for the best application oriented paper, Lt. Cdr. Abhijit, Sep, 2013.

Centre for Biomedical Engineering

- Manoj Kumar, SPIONs based Delivery systems for pro-apoptotic peptide as potential therapeutics for BCL-2 overexpressing cancers. Oral presentation in International Conference on Environment, Health, and Industrial Biotechnology (BIOSANGAM-2013), November 21-23, 2013. Awarded 'Young scientist award' for the work.

Centre for Rural Development and Technology

- Mr Pradip Narale and Ms Rimika Kapoor won 7th ENERTIA Awards for "Biogas Upgradation, Bottling for Vehicular Application" in 2013.

Amar Nath and Shahi Khosla School

- "Early Exploration for Platform Architecture Instantiation with Multi-mode Application Partitioning".
- Prashant Agarwal, Praveen Raghavan, Matthias Hartmann, Namita Sharma, Liesbet Van der Perre, and Francky Catthoor, DAC 2013 (Awarded the HiPEC paper award).

School of Biological Sciences

- Mr. Hirdesh Kumar (DAAD Fellowship) 2013
- Ms. Rishibha Sachdev (DAAD Fellowship, Sandwich Ph.D. programme) 2014.
- Mr. Ankit Srivastava- selected and presented poster at Gordon Research Conference, Texas, USA, 5th to 10th Jan
- Ms. Rishiba Sachdeva, Presented poster at international conference, 13th to 16th April 2014 at Srinagar.
- Ms. Rachana Tomar presented her synopsis on 15th April 2014.
- Mr. Jasdeep Singh selected for training programme at Japan under Jenesys 20 short term programme.

Scholarships, Assistantships and Awards

The students pursuing Ph.D. are also eligible for assistantships. This year 334 students were awarded assistantships. Assistantship to existing students continues provided, they show satisfactory progress. The table below gives a discipline wise break-up of assistantships awaited during the period.

Table V : Institute Assistantships Awarded to Research Scholars during the Session 2013-2014

Department/Centre	No. of Assistantships Renewed	No. of Assistantship Awarded (2013 entry)
Amar Nath and Shashi Khosla School of Information Technology	10	1
Bharti School of Telecommunication Technology & Management	29	6
Applied Mechanics	22	14
Biochemical Engineering & Biotechnology	27	4
Chemical Engineering	46	14
Chemistry	81	25
Civil Engineering	49	27
Computer Science & Engineering	15	12
Electrical Engineering	48	43
Humanities & Social Sciences	14	11
Management Studies	21	18
Mathematics	30	—
Mechanical Engineering	38	29
Physics	74	24
Textile Technology	18	6
Centre for Applied Research in Electronics	16	3
Centre for Atmospheric Sciences	19	5
Centre for Biomedical Engineering	12	10
Centre for Energy Studies	35	39
Industrial Tribology, Machine Dynamics & Maintenance Engineering Centre	7	4
I.D.D. Centre	10	3
Centre for Polymer Science & Engineering	23	10
Centre for Rural Development & Technology	16	16
School of Biological Sciences	24	7
Transport and Energy Prevention	3	3
Total	**687**	**334**

Infrastructure Development

(April 1, 2013 - March 31, 2014)

PHYSICAL INFRASTRUCTURE

All infrastructures related activity is managed by the Building and Works Committee as given in Appendix III. The revised Master Plan of the Institute was approved by MCD / DUAC. The Master Plan is suitably prepared to provide for further expansion plans of the Institute. In the year 2013-14, the Institute has taken up following major projects which are under construction.

1. Lecture Theater –cum- Lab Complex

L.T. Complex which is under construction shall provide lecture halls of 2 No. x 500 Seater, 3No.X300 Seater and 12 No. x 150 Seater capacity and 9 class rooms of 60 Seater capacity each. The Lab block of the L.T. Complex shall cater for facilities for Physics lab, Language lab, Graphic lab,Chemistry lab, Applied Mech. Lab, Bio Science lab, Electrical Engineering and Computer lab. The RCC structure work in lab block is completed and finishing work is nearing completion. The furniture of above labs has also been finalised by users committee and CPWD has invited tender for the same. The L.T. complex is expected to be completed by Dec - 2014.

2. Construction of Clean room on the ground floor and first floor in block VI for Nanoscale research facilities (NRF)

The renovation work for creating clean room on the ground floor and first floor in block VI for Nano scale research facilities (NRF) is in progress and shall be ready for use by Nov. 2014.

ACADEMIC INFRASTRUCTURE

1. Construction of Institute (Students) Activities Centre

The conceptual design of Institute activities centre has been prepared. The B&WC considered and accepted the conceptual design. The modified drawings are being submitted to MCD/ DUAC for approval. The construction work shall be taken up after obtaining statutory approvals.

2. Construction of Boys Hostel 'E'

Institute is planning for construction of another Boys' Hostel (Hostel 'E'). Architect has prepared conceptual design of Hostel 'E' which was approved by B&WC Committee. The modified drawing has been submitted to MCD/DUAC for approval. The Construction work has been assigned to CPWD. The hostel will cater to 1000 students (approx.). The work shall be taken up for construction after obtaining statutory approvals.

3. Construction of 414 Single Seated New Girls Hostel

The Institute has assigned the work to Panel Architect. This hostel will accommodate 414 students. The proposed hostelshall be constructed along North Avenue adjacent to Himadri Hostel, which also involves demolishing 2 Blocks in North Avenue in the East campus. The concept design was approved by B&WC. The Architect is arranging to submit building plans to SDMC / DUAC for approval. The Construction work of the hostel has been assigned to CPWD. The work shall be taken up for construction after obtaining statutory approvals.

4. Construction of Golden Jubilee G.H. Keshwani Research Centre

The IITD alumnus Sh. G.H. Keshwani has agreed to donate fund for construction of Golden Jubilee G.H. Keshwani Research Centre at IIT Delhi. Approx. 11,000 Sq.mt. of area shall be constructed for research facilities at Ground + 6 floors. The Architect has prepared the submission drawings and submitted to SDMC for necessary approval. The work shall be taken up for construction after obtaining statutory approvals.

5. Lifts for Physically Challenged Persons in Academic Area

The Institute has planned for providing 8 Nos. Lifts for physically challenged persons in the academic area. The work has started at site and likely to be completed by 31.03.2015.

6. Construction of Main Swimming and a Small Swimming pool for children in IITD

An Olympic size Swimming pool & small pool for children has been commissioned & the same was inaugurated by the Chairman BOG. The Swimming pool is being used by staff and students of IITD.

7. Construction of STP/ETP and Network Connecting Sewer Lines to STP/ETP.

The Institute is planning to construct STP/ETP for compliance of the requirements of Environment Clearance accorded by the MoEF. Accordingly it was proposed to construct 3 STP's and 1 ETP in the campus. A consultant has already been *www.iitd.ac.in* appointed by the Institute and the work on collection of data for design work is being carried out by the

consultant. The Consultant has submitted the conceptual design and preliminary estimate which has been approved by B&WC. EOI is being invited to shortlist the contractors/ firms for execution of the work of STP in the campus.

8. Construction of Engineering Block 99B and 99C

The conceptual design for the proposed Engineering Block 99B and 99C was placed before the B&WC and the same was accepted and approved. The two blocks shall be constructed on both sides of ongoing project of L.T. cum Lab Complex. The two blocks shall provide additional area for Labs, Workshops, Faculty rooms etc. The available floor area for Engineering Block 99B shall be 32,550 Sq.mt. and for Engineering Block 99C shall be 26,250 Sq. mt.

9. Construction of Additional Faculty Flats in West Campus near Vikramshila Apartments

The Institute has recently constructed 96 Faculty flats which have been allotted to eligible Faculty members. In order to meet with the increased demand for houses for Faculty, the Institute is considering for construction of more faculty flats. M/s Kothari Associates Pvt. Ltd., Panel Architect was assigned the work for design of faculty flats and the concept design was accepted and approved by the B&WC. Architect is preparing the submission drawing for obtaining necessary approvals.

10. Solar System of 1MWP in Academic Area

Solar system of 1MWP capacity is proposed in Academic area the work was taken up and about 200 KWP has been commissioned till date.

11. Solar System of 20 KWP at Director's Lodge.

Solar system of 20 KWP has been installed & commissioned at Director's lodge.

12. Online Energy Monitoring of Bharti School Sub-station.

Online Energy monitoring of Bharti Sub-station has been implemented & we propose to expend this in entire campus.

13. Development of Rajiv Gandhi Educational Centre Campus of IIT Delhi at Kondli, Sonipat.

IIT was allotted 50 Acres land in Rajiv Gandhi Educational City Kundli Sonipat. Compound wall construction is in progress. The concept design & expenditure sanction for construction of Innovation Centre for Education has been approved and tenders for the work is being invited by M/s NBCC Ltd. The Innovation Centre for Education will be having an approximate built up area of 33,500 Sq. mt. in Ground & four floors. This facility will be used as Residential training of Faculty.

MAJOR NEW EQUIPMENTS INSTALLED

Department of Chemical Engineering

- Photo Electrochemical Workstation
- Scanning Electrochemical Microscope
- 100 ML Lab-Autoclave
- Vapor-Liquid Equilibrium UG Lab
- Double Pipe Heat Exchanger in UG Lab
- Time constant of Manometer
- Level measurement by capacitance method
- Time constant of Thermocouple & Themometer
- Two-tank interacting & non-interacting system
- Control Valve Characteristics
- Flow Control Trainer
- Capillary Electrophoresis-Mass Spectroscopy (CE-MS)
- Octet
- XRD
- Hybrid CPU/GPU Cluster in Research lab II -11
- Electrical Capacitaure / Resistance Tomigraphy

Department of Chemistry

- Confocal Raman Spectrometer
- FTIR Spectrophotometer

Department of Civil Engineering

- Particle size and zeta potential analyzer
- A complete Vibration Testing Set-up (Capacity: Peak force 5000 kgf at 45 Hz)
- 250 kN MTS servo-controlled actuator
- Automatic Blaine permeability apparatus
- 3 Tonne fork lift

Department of Electrical Engineering

- INNORAM: Ram Spectrometer.
- ST-UT Series Upgradable Optical Table.
- Mechanical Servo Experiment Made: Qunser Inc.
- Haptics Device Comprising: OMNL Bundle-Haptic/ Robotics.
- Industrial Microscope with all accessories.
- Terrasas – PV Simulator with S/w.
- Power Analyzer.
- Thermo Scientific Max Q4000 Large. Refrigerated bench.
- Power System Network Studies.
- DSO with Accessories.
- Pioneer 3 DX Robot.
- 26.5 GHz Fox Microwave Analyzer.

- RT-Lab RCP and Hil System.
- NAIO AFM with Accessories.

Department of Physics

- PPMS (Physical Property Measurement System)
- Time resolved Photoluminescence Spectrometer
- Probe station
- RF Sputtering system
- Thermal Chemical Vapor Deposition

Department of Textile Technology

- Differential Scanning Calorimeter-TA Instruments
- KES- FB Friction Tester

Centre for Applied Research in Electronics

- Full Anechoic Air Acoustic Chamber
- 26.5GHz Hand Held Vector Network Analyzer
- Mask Cutter/Plotter
- Olympus Microscope

Centre for Biomedical Engineering

- Raman confocal microscope

Centre for Polymer Sciences

- Microcompounder
- Micro Injection Molding
- Autosamples for DSC/TGA
- Coefficient of friction
- Servo hydraulic- UTM Machine (MTS) (Bionix)

Centre for Rural Development and Technology

- Automatic Nitrogen and Metal Analyzer with Digester (HACH)

Amar Nath and Shashi Khosla School of Information Technology

- We have procured certain equipment, furniture etc. in order to set up (1) Assistive Technologies Lab, Virtual Reality Studio, (3) IT for Society Lab,
- Medical Applications of IT Lab, (5) Advanced Technologies & IoT Lab (Kripalani Lab),
- Architecture, Embedded & Energy Sensitive Computing Lab and
- Cyber Security Research Lab

Kusuma School of Biological Sciences

- Cryo- Electron Microscopy
- Mass spectrometry

EDUCATIONAL TECHNOLOGY SERVICES CENTRE

The Educational Technology Services Centre (ETSC) is actively engaged in promoting the use of Educational Technology at the Institute and also at the national level. Some of its major activities are:

- Design & Development of Instructional Resources (videos and web based).
- Provision and maintenance of AV equipment for classroom teaching.
- Video and computer based instructional packages.
- Organize training programmes for faculty and professionals across the country.
- Video conferencing for faculty selection interviews and meetings.
- E-learning and distance education.
- Undertake sponsored research and consultancy projects.
- Transmission of an independent 24x7 EKLAVYA technology channel.
- Telecast video courses under NPTEL programme on EKLAVYA.
- Administration of ACADO Server (LMS).
- Offer support for classroom teaching.

- Dissemination of Instructional Resources: through development of information brochures and databases.

The Centre has a modern video studio with recording and editing facilities in DVCAM format. A studio-classroom with seating capacity of 60 is available for on-line recording of courses. Nonlinear editing setup and Apple Streaming server are available for post production and video streaming. ETSC takes care of the audio-visual needs of faculty and students. In addition to equipping the classroom with these facilities. ETSC runs a loan service. A media reference library with multiple viewing cabins has been set up in the Central Library for the use of students and faculty. The Educational Technology Services Centre has a computer laboratory with

modern multimedia capabilities and internet connectivity. Computer Aided Instruction/Computer Aided Learning courses/packages are developed in the computer laboratory. Learning materials generated by ETSC are disseminated at nominal price throughout the country and abroad.

The Centre conducts short courses and modular programmes on different aspects of educational technology for teachers and staff from the Institute and from other educational institutions and industry institutions. These courses are designed to sensitize and guide the faculty to optimize their effort and time for classroom and laboratory instruction as well as professional development. The Centre offers its services to departments, individual faculty or groups of faculty members in revising, redesigning and innovating curricula.

The Centre has the expertise and experience of undertaking national and international level consultancy and sponsored research projects. It has worked with agencies such as the World Bank, AT&T, AICTE, UNESCO, UNDP Commonwealth of Learning. The British Council and Adis Abada University, Ethopia. The NPTEL project funded by MDRD has been successfully completed. Under this programme, all the seven IITs and Indian Institute of Science have worked together to develop web and video based education material for undergraduates courses initially in five disciplines, viz., Civil Engineering, Computer Science and Engineering, Electrical Engineering, Electronics and Communication Engineering and Mechanical Engineering. The web courses so developed are available through the various servers authorized by NPTEL Phase II of NPTEL Project is nearing completion where its scope has been further expanded to include more disciplines and advanced/post graduate courses. ETSC has procured and installed Sony ANYCAST system in the Video Studio and in two lecture theatres for non linear editing and recording. Video Conferencing facilities have been installed in the two lecture theatres and in the Conference Room of ETSC. The facility is being used for faculty interviews, meetings and distance education. For connectivity both ISDN and IP based network connection are used. For classes to Adis Ababa University, two lecture delivery rooms have been equipped with remote teaching facility. A dedicated two-way video link is also provided for live delivery. Two new lecture rooms have also been equipped with audio/video, projection, distance education and recording facilities. In addition, three Virtual Classrooms are also being equipped under National Knowledge Network (NKN).

COMPUTER AND INTERNET SERVICE

The main objectives of the Computer Services Centre are to :

- provide round the clock computing and networking facilities to serve a user population of more than 9000 users consisting of undergraduate, postgraduate, research scholars, faculty and staff of the Institute and provide advice on all the aspects of academic computing.
- implement and maintain system and application software.

- implement and manage the Institute Network.
- impart introductory and advanced instructions to users.
- work on cutting edge technology and provide the user community with services based on new technology .
- provide support to Institute computerization efforts.
- do in-house development in IT related areas.

In addition, the center also participates in the Academic programmes of various departments, undertakes Sponsored Research and Consultancy Projects and Conducts CEP Courses in several topical areas of Information Technology.

Goals Achieved during the year

The following activities have been undertaken during the year 2013-14

- CSC has begun building a new Data Centre which will have the IT infrastructure and a HPC facility. A disaster recovery centre is also being built so the uninterrupted IT services may be provided to the Institute community.
- IIT Delhi has become a part of Eduroam, a global Wifi roaming programme across academic campuses through ERNET India.
- CSC has implemented ownCloud, a file and document

sharing utility similar to the popular dropbox for use by the IITD community. The utility supports storing and sharing of files, images, music and documents, contacts, calendars, tasks etc.

- The CSC has commissioned a CUDA based high performance computing GPU mini-cluster environment of 16 nodes, each with 2x8 core ES-2670 (Sandybridge) CPU, 64 GB RAM and 2xNvidia K20 GPUs. The nodes have 64Gbps IB interconnect. Very soon within next few months this will be extended to 750 Tera flops system in the new Data Centre.
- Fiber connectivity has been provided to more than one thousand residential houses for internet which will be based on GPON technology.
- IITD has upgraded the routers and switches for internet access and in the core and distribution network, the existing multimode fiber has been replaced with new single mode fiber. The backbone is now ready for dual redundant connectivity and 10 Gbps. The core switches have been upgraded to 10Gbps ready Nexus 5596UP's. The core switches will be upgraded to Nexus -7010's after the DC and DR sites are ready by the end of Oct. 2014.
- Newly developed Website for IITD Hospital, Centre for Biomedical Engineering, SLA for Infrastructure, Academic Time Table, Online Agenda & Minutes of IITD Senate and bilingual IITD Administration website.
- During the past one year more than sixteen MATLAB workshops have been conducted for the benefit of the students.

General Computing Facilities

The Centre is equipped with 78 HP blade servers out of which 48 Blade Servers are used for cloud computing with 50 TB of virtualized storage and 30 blade servers with 50 TB of storage for user homes and infrastructure use like email, proxy, web services etc . CSC also has 20 workstations for Simulation facility, and about 220 desktop computers connected over a switched fast Ethernet. Uninterrupted Power Supply is provided through 3x 80 KVA MGE UPS system and DG set.

The CSC has commissioned a new CUDA based high performance computing GPU mini-cluster environment of 16 nodes, each with 2x8 core ES-2670 (Sandybridge) CPU, 64 GB RAM and 2xNvidia K20 GPUs. The nodes have 64Gbps IB interconnect. Very soon within next few months this will be extended to 750 Tera flops system in the new Data Centre.

Following are some of the major computing facilities/Services that the center has at present

- The Email facility is provided to all students, staff and faculty with webmail interfaces Roundcube and Squirrelmail using User and mailing list definitions from the IITD LDAP and Kerberos for user authentication.

- The CSC provides Infrastructure services through virtualization technology.
- Compute facilities for research and projects are provided through the Baadal, the cloud computing environment.
- The Centre maintains local repositories of several popular open-source and commercial licensed software.
- The CSC has Microsoft Volume Licensing EES agreement for the Campus under which Microsoft software are available for use.
- The Centre has the following software packages: Matlab, Mathematica, Abaqus, Ansys, Fluent, Comsol, Visual Studio etc.
- IITD campus Wifi Service – IITD_WIFI1, IITD_WIFI2, IITD_WIFI3 and IITD_Guests are available in the academic area , guest houses. The campus Wi-fi provides secure wi-fi access using 802.1x authentication. IIT Delhi is in the process of replacing the current WIFI solution with the CISCO WIFI solution within next few months.
- IIT Delhi is also a part of Eduroam, a global Wifi roaming programmeacrossacademiccampusesthroughERNETIndia.

Other Infrastructure support services and Network Services provided by CSC :

Web Services

- Virtual web hosting facility can be used for securely hosting all websites of the form http://xyz.iitd.ernet.in which are not maintained by CSC.
- Network Time Protocol (NTP) servers are available for use. These time servers are synchronized with standard internet time servers with time drift less than a few milliseconds.

PC Services

There are five PC Labs in the Centre having about 220 Desktop computers under Windows and Linux environment. The PC Labs I, II, III and IV have about 160 computers running Ubuntu 13.10 and PC Lab-V has about 60 computers running Windows 7. The user areas of PC Labs I, II having Linux systems and the

main Hall housing Windows machines are open round-the-clock for authorized users from April, 2014.

Simulation Lab

The simulation lab is equipped with 20 Dell workstations under Windows7 for CAD/CAE/ CUDA and High Performance Computing (HPC).

Network Services

The Institute LAN is a state of the art switched network with Fiber Optics and enhanced CAT5/CAT6 UTP backbone. It consists of more than 7500 network access points spread over the campus using about 175 Cisco switches and about 75 virtual LANs. Network access is provided to every student, faculty, Doctor, Laboratory and rooms in guest houses. Internet connection has been provided through a router, redundant firewall switching modules, 4x2Mbps leased circuits from VSNL, 1x2 Mbps circuit from ERNET and 1 Gbps (1:4) internet leased circuit.

Internet and Intranet access is provided to faculty/officer homes via ADSL connectivity over internal telephone lines. The academic area is also connected through secure Wi-Fi. An independent network has been provided for administrative functions. Many network services including mail, web, domain name, and anti-virus are being provided over this network. IIT Delhi is connected to the National Knowledge Network (NKN) with 1Gbps dual connectivity from PowerGrid and RailTel. This connectivity provides virtual routing service for Garuda Network, Internet Connectivity, and connectivity with other Institutes connected on the NKN backbone.

IITD has upgraded the routers and switches for internet and the core and distribution network and has replaced the existing multimode fiber with single mode fiber. This has made the backbone ready for redundant connectivity and 10 Gbps. IIT Delhi will soon deploy GPON technology for residences and fiber-to-home (FTTH) is also in an advanced stage of completion.

CENTRAL LIBRARY

The IIT Delhi Library System comprises of a Central Library and 18 departmental libraries that collectively support the teaching, research and extension programmes of the Institute. All students, faculty and employees of the Institute are entitled to make use of the Library facilities. The Alumni of the Institute are also entitled to Library services provided they are members of the Institute's Alumni Association. Similarly, industrial establishments can avail the Library services on taking corporate membership of the Library. Library consultation facilities are extended to faculty, students of outside organizations and the wards of IIT faculty and staff on their request. Retired teaching and non-teaching staff members can also avail Library facilities. The Library has over 9400 registered members.

Library Hours

The Library remains open throughout the year except on six days, namely; Republic Day, Independence Day, Dussehra, Diwali, Holi, Mahatma Gandhi's Birthday and any other holiday declared as a special holiday. It remains open 24 Hrs. during semester exams; from 8.45 A.M. to 12.00 Mid-night from Monday through Friday and from 9.45 A.M. to 6.30 P.M. on Saturdays, Sundays and Public Holidays.

Library Resources

a. Collection

The Central Library, IIT Delhi has a strong collection pertaining to physical sciences, engineering and technology, biotechnology, computer and information technology, social sciences and management.

As on 31st March 2013, the collection of the Library ia as follows :

Books	1,96,558
Journals (Bound Volume)	1,05,765
Standards	26,923
Microfilms	2,261
Theses	4,512
Technical Reports	13,430
Video Cassettes	1,800
CDs	5,550
Books in Text Book & Book Bank	22,426
Online Electronic Journals	10,000
Online Databases	6
CD-ROM Databases	2

b. Video Library

The Library is equipped with video viewing facility and has a collection of more than 1,800 CDs and kept in the Computer Application Division of the Central Library for viewing

c. Reference Collection

The Library maintains a separate reference collection consisting of encyclopedias, dictionaries, handbooks, technical data, almanacs, atlases, bibliographies, etc.

d. Hindi Collection

The Central Library has built up a good collection of books in Hindi. Books in Hindi include books on various subjects being taught and researched at the Institute as well as books on literature in Hindi. Books in Hindi are prominently kept near the reference area in the Library to promote its usage. To increase the use of Rajbhasha Hindi, Central library offers borrowing facility of one extra Hindi Book to all its members apart from their entitlement.

Electronic Journals and Online Bibliographic Databases

The Library subscribes to 618 current journals (online) which are also accessible online from the publishers' web site. Links to these electronic journals are available through the Library web site as well through the Library Web OPAC. More than 1,05,765 bound volumes of journals are available in print form.

Besides, the Institute has access to over 10,000 full-text electronic journals and 6 bibliographic databases from a number of publishers and aggregators through the INDEST-AICTE Consortium. The INDEST-AICTE Web Site (http://paniit.iitd.ac.in/indest) hosts search and browse interface to locate these journals and their URLs. Details of resources made accessible to IIT Delhi through the Consortium along with their URLs are given in "Library Reference Guide" and on the Library & INDEST websites. Tutorials on e-resources accessible through the INDEST-AICTE Consortium are available on the INDEST-AICTE Web Site and are also published in "Compendium for the Members of the INDEST-AICTE Consortium".

Besides access to current e-journals; the Library has also purchased backfiles of electronic journals from a number of publishers / aggregators from their volume one onwards on "one-time payment and perpetual access basis". The backfies purchased by the Library includes: Elsevier's Science Direct (24 subject collections, 1186 e-journals), Wiley InterScience, (66 Core title and 262 custom collection, 27 e-journals), Springer's Open Journal Archives (11 subject collections, 812 e-journals), JSTOR (7 subject collections, 1548 journals) and Project Muse (296 Journals).

a. E-Resources available through Central Library

- Online Miscellaneous Journals
- Lecture Notes in Computer Science, Mathematics and Physics (Vol.1/1969-Vol. 476/1996)
- ACS Archives
- American Mathematical Society Journals
- American Meteorological Society Journals and Archives
- ASME Digital and Archives

- Availability of Hindi on the Internet
- Cambridge University Press HSS and S&T package
- E-Books from Textbooks Section
- EBSCO Textile & Technology Complete
- I.C.E. and their Archives
- Imech E Publications Current
- INFORMS Current Journals
- IoP Science and their Archival collection
- ISI Emerging Markets [Tutorial]
- JSTOR [Tutorial]
- Oxford Journals on Mathematics, Life Science, Humanities and Social Science
- Project MUSE Journals
- RSC Journals Archive Titles (1841 - 2004)
- Sage HSS & Management Journals and their Archives
- Science (Current and Archives)
- SIAM Journals and their Archives
- Taylor & Francis, Current Core Science & Technology Titles+ Chemistry Backfiles
- Wiley Journal Titles
- World Scientific Publication Mathematics
- World Textiles

b. E-Resources available through INDEST-AICTE Consortium

- ABI / Inform Complete
- ACM Digital Library
- AIP/APS Journals
- ASCE Journals
- ASME Journals (+ A M R)
- ASTM Standards & Digital Library
- Capitaline
- EBSCO Databases

- Elsevier's Science Direct
- Emerald Full-text
- Euromonitor (GMID)
- IEEE / IEE Library Online (IEL)
- INSIGHT
- Nature
- Optical Society of America (OSA)
- ProQuest Science
- Springer Link
- MathSciNet

c. Electronic Books

The Institute has access to electronic books from the following publishers / aggregators:

- Elsevier Book Series on Chemistry, Business, Management & Economics, Life Sciences and Methods in Enzymology through the Science Direct (http://www.sciencedirect.com)
- Springer's Electronic Books (about 100 e-books) (http://ebooks.springerlink.com)
- Wiley InterScience Electronic Books (about 100 e-books)
- E-brary (29368 books)
- Myilibrary
- E-Text Books (35 books)

Computer and Networking Facilities

The Library has its own sub-LAN, which, in turn, is connected to the Campus LAN. It has over 100 PCs and eight servers spread over three floors of the Library.

The Library is a part of fibre optic-based campus-LAN. Of 100 PCs in the Library, 70 Internet-enabled PCs are exclusively devoted for the Library users. As a member of the DELNET, the users can access databases offered by the DELNET. The Library Home Page provides a link to the DELNET database.

a. Computerization of In-house Activities

All in-house activities in the Library including Acquisition, Cataloguing, Circulation and Serials Control are fully computerized using Libsys Software Package. The Online Public Access Catalogue (OPAC) of the Library is operational both on Intranet and Internet. It can be accessed online to search more than 1,75,000 bibliographic records, available in the Library database through a web-based search interface or with a window client of the Libsys on Intranet as well as on Internet. The editing and updation activities are done on regular basis. Besides, the Central Library has two in-house databases for specialized collections. These databases include: Database of Ph.D. theses submitted to the IIT Delhi and Database of research articles by the faculty and researchers of the Institute.

The Library uses bar-code technology for computerized circulation system. Every document in the Library (except reference sources and bound volumes of journals) bear a bar-code tag that facilitates identification of document and the borrower in the circulation process. Similarly, all categories of users have a bar-coded patron cards. The Library has developed in-house facility for bar coding of books and patron cards.

b. RFID Implementation in the Library

The Library also has the Radio Frequescy IDentification (RFID) based system. It is the best automated library automation system used world wide and is an effective way of managing collections of the library and providing enhanced services to the users having benefits like: self check-out of books, self-check-in (book drop), to control theft, to find misplaced reading material, sorting, inventory accuracy, stock verification procedures, security control, video surveillance, people counter, Smart Card issuance, etc. It is an automatic data capture technology that uses tiny microchips and miniature antennas affixed to documents. RFID plays a vital role in redefining the library processes to make everyone's job easier right from the users to library staff.

c. Database of Research Articles by the Faculty and Researchers of IIT Delhi

The Library maintains a web-enabled database of research articles published by the faculty and researchers of IIT Delhi. The database consists over 17,000 research articles and their abstracts that appeared in international peer-reviewed journals indexed by Science Citation Index/SCOPUS. The database is being updated regularly for new records that are added to the Science Citation Index/SCOPUS.

Library Services and Facilities

a. Reader's Assistance

The Library provides assistance to its users ranging from location of a book to finding specific information required by a user. A suggestion book is maintained with Incharge, Reader's Services where the users of the Library can suggest measures for improvements in its facilities and services.

b. Circulation of Books and Library Membership

The Library members, according to their borrowing category can borrow stipulated number of books at a time against their bar-coded patron card. During the period under report, about 60,000 volumes were borrowed by the members of the Library from general collection.

In addition, consultation facilities were extended to around 5,000 users including students, research scholars and faculty members belonging to other academic institutions. More than Rs. 1.5 lakh were earned from the corporate membership fee.

c. Inter Library Loan (ILL) and Resource Sharing Facility

The Library arranges books and journals from other libraries in Delhi on Inter Library Loan (ILL). Photocopies of research articles are also arranged from other IITs under a resource sharing agreement signed by all IITs. The Library also facilitates Demand based procurement of research publications, photocopies of research articles, etc. from other IITs and institutions in Delhi as well as from other parts of India on reciprocal basis as detailed below from last year data:

Journal articles/other publications received from other sources in Delhi and outside Delhi 102

Publications lent to other libraries on their request (including Corporate Members) 153

d. Database of Ph.D. Theses Submitted to the IIT Delhi

The library has in-house design and developed PhD theses database. Contains approximately 4100 bibliographic records of Ph.D theses submitted to the IIT Delhi. In the year 1966 the first Ph.D has awarded after that number of Ph.D research has been continuously increseing every year till dated. The Database developed and maintained in MySQL Database and programmed using PHP language to facilitate access on the Intranet and Internet.

e. Photocopying Facility

The Library provides photocopying facility within its premises through an external vendor on payment basis.

f. Book Bank Facilities

The Book Bank holds multiple copies of selected textbooks for making them available to the students for the entire period of a semester. Up to 6 books can be reserved and issued per semester by the undergraduate students and the Library collects up to a maximum of 10% of the cost per book as rental charges or Rs. 20 per book whichever is less. However, for SC/ST Students, an amount of Rs. 75 is waived off from the total rental value. The rental charges for Book Bank are deposited in Canara bank, after that only books are issued and given to the students. During the period under report, approximately 884 students (including SC/ST students) availed the benefit of book bank scheme.

g. Text Books Facilities (Print and Online)

The text books are most useful collection of the library especially for course/syllabus related reading. The section has approximately 10,000 syllabus related text books. The books for this section are purchased generally on the recommendations from different faculty members through the concerned Heads of the Department. The timings for issuing the books from the Text Book Section are from 2 PM to 5 PM during Monday to Friday and the same are issued for overnight only (for one day). The books of this section may be returned back during 9 AM to 1 PM only. A maximum total of 2 of books are issued from the section at a time. The Central Library also has 35 e-textbooks for undergraduate students and the same are accessible in the campus through library website - http://library.iitd.ac.in/index.php/e-resourc/e-textbooks.

h. Theses Consultation Facilities

Central Library receives all the Ph.D. Theses awarded by IIT Delhi in Hard copy along with their CDs. Print copies of theses are housed in Text Book & Book Bank Section located at the ground floor of the library for consultation purpose only. The abstracts of theses are made available through library Online Public Access Catalog (OPAC) -http://libcat.iitd.ac.in:8080/webopac_old/html and also through another interface especially designed for searching the theses at: http://library.iitd.ac.in/thesis.

Web-based Computerized Services from the Library

The Central Library offers the following services to the Institute:

a. Network-based CD ROM Search Services

The Library has complete collection of Indian Standards and ASTM Standards on CD ROM that is available on the Campus network. The resources can be accessed on the Intranet at the URLs given below or through library website at http://library.iitd.ac.in:

- Indian Standards
  http://10.116.2.102/bis/
- ASTM Standards
  http://10.116.2.102/astm/
- IEC Standards
  http://10.116.2.102/iec/

b. Institutional Repository at IIT Delhi (http://eprint.iitd.ac.in/dspace/)

The Eprints @ IIT Delhi has been set-up to host full-text of research publications of faculty and researchers of the IIT Delhi using Dspace, an open source Digital Library software developed by the Massachusetts Institute of Technology. The Dspace supports the Open Archives Initiative's Protocol for Metadata Harvesting (OAI-PMH), an internationally recognized protocol and interoperability standard. The Eprints@IIT Delhi provides a platform for faculty and researchers to deposit, reuse and share their research publications. The repository also has the ability to capture, index, store, disseminate and preserve digital materials created in any part of the Institute. Faculty and researchers can register themselves with the digital repository and submit their pre-prints (pre-refereed version of an article), post-prints (post-refereed final version) and publisher PDFs (if allowed by the publisher). The repository has around 2,200 full-text research articles.

INDEST-AICTE Consortium

The "Indian National Digital Library in Engineering Sciences and Technology (INDEST) Consortium" was set-up in 2003 by the Ministry of Human Resource Development (MHRD) on the recommendation of an Expert Group appointed by the Ministry. The IIT Delhi has been designated as the Consortium Headquarters to coordinate its activities. The Consortium enrolls engineering and technological institutions as its members and subscribes to electronic resources for them at discounted rates of subscription and favourable terms and conditions. The Ministry provides funds required for subscription to electronic resources for 65 centrally-funded Government institutions including IITs, IISc Bangalore, NITs, IIITs, IIMs and few other Institutions that are considered as core members of the Consortium. The benefit of consortia-based subscription to electronic resources is not confined to its core members but is also extended to all educational institutions under its open-ended proposition. 60 Govt. / Govt.-aided engineering colleges are provided access to selected electronic resources with financial support from the AICTE and over 130 engineering colleges and institutions have joined the Consortium under its self-supported category. Consortium was re-named as INDEST-AICTE Consortium in December 2005 with the AICTE playing a pivotal role in enrolling its approved engineering colleges and institutions as members of the Consortium for selected e-resources at much lower rates of subscription. Presently, Prof. R.K. Shevgaonkar, Director, IIT Delhi is the Chairman of the National Steering Committee of the INDEST-AICTE Consortium, which formulates guidelines for the Consortium and Prof. B.D. Gupta is National Coordinator, INDEST-AICTE Consortium.

MECHANICAL FABRICATION FACILITY (IDDC)

The Mechanical Fabrication Facility was a Central Facility located at IDDC Centre to cater to the entire post graduate mechanical fabrication needs of the institute. However, it is under re-organization and is being clubbed with Central Workshop.

CENTRAL WORKSHOP

Central Workshop is one of the pivoting units of the institute which teaches conceptually "how" a product comes to its present form by way of imparting core manufacturing education to all the first year students of IIT Delhi. It also provides product manufacturing support to entire institute community in general and undergraduate students in particular. More than 900 undergraduate students in their first year acquire hands-on manufacturing skills in this Central Workshop. The Central workshop not only introduces art and science of manufacturing but also infuses confidence to take up product design and manufacturing activities in future. Central Workshop is also a place where B.Tech students of Mechanical Engineering and B.Tech students of Production & Industrial Engineering acquire training and knowledge in specialized areas of manufacturing like Metal Casting, Metal Forming, Metal Machining, Welding & Joining, Metal Forging Woodworking, CNC programming and 3D Printing, Plastic Product manufacturing etc. M.Tech. students of Production group also use central workshop facilities for their practical classes in various courses as well as for project and research work.

The central workshop is fully equipped with latest power tools, equipments and facilities in all areas of manufacturing technologies. It also caters to the fabrication needs of students doing product design & manufacturing courses, minor projects, B.Tech, project, Masters thesis and Doctoral research. Large numbers of students use this facility to build products and compete at national and international level product building competitions like Formula student car, mini Baja, Robocon etc. The facility can also be used by external agencies for their manufacturing and training needs during the vacation period.

Central workshop has undertaken efforts to reorganize, modernized and prepare it for continuously changing global manufacturing scenario. Efforts are also on to prepare students for a broader view of manufacturing which involves planning and deploying optimum ways to transformation of raw material into goods by integration of people, capital, processes, systems and enterprises to deliver products of value to the society.

A new shop 'CNC Learning' is created in 2013-14 to imbibe product realization through computer generated geometries. A rapid prototype model can also be visualized by use of state of art 3D Printing technology in this new shop of Central Workshop.

IIT HOSPITAL

The Institute has a 12 bedded hospital centrally located in the campus, providing facilities for OPD treatment and admissions. The Hospital is managed by a team of full time 10 Allopathic Doctors and one Homeopathic doctor. The Hospital is also visited by part time specialists from AIIMS in the field of Orthopaedics, ENT, Opthalmology, Skin disease, Radio-Diagnosis, & Psychiatry. The doctors are assisted by efficient group of Pharmacists, Nurses, physiotherapist and other

Paramedical Staff. The hospital is well equipped to take care of primary emergencies and serious patients are carried to All India Institute of Medical Sciences (AIIMS) and Safdarjang Hospital (SJH) in an Ambulance, which is available 24 hours, on all days.

IIT Delhi Hospital is the recognized centre for Pulse polio immunization, Measles, Matri Suraksha Abhiyan and other programmes by the Government. Hospital provides medical aid during sports meets, Rendezvous, culture function etc. Demonstrations in first- aid, AIDS and Cardio – pulmonary Resuscitation (CPR), and other medical problem are conducted for the students and other staff of the Institute. Free educative and health checkup camps are also provided for the IIT community.

The Institute has a medical Insurance scheme (see section 7.18) that provides cashless facility for indoor admissions in panel hospital.

Hospital Statistics 2013-2014	
Patients Attended in OPD	99,473
X-Ray	3,739
Ultra Sound	283
Patients Admitted	472
Physiotherapy	3,659
Sergical Dressing	2,624
Dental Treatment	2,870
Pathology Lab Test	38,444
ECG	1,820

Hospital Facilities

a. OPD facility

Hospital has a large new OPD complex with excellent waiting facilities for patients where, prompt OPD services are provided by doctors. There is also a waiting hall with chairs, a TV, public utilities like drinking water and toilets. Wheel chairs, trolleys and attendants are there to help very sick patients.

b. Dental facility

Dental surgeon carries out procedures like Dental extractions, scaling /cleaning, extractions, fillings, & RCT.

c. Ward/ Indoor facility

Patients are kept for observation and admitted for treatment of medical problems like typhoid, acute gastroenteritis, COPD, bronchial asthma, malaria, Dengue pneumonias etc.

d. Minor OT

Minor surgical procedure like dressing of lacerated wound, suturing of minor lacerations & resuturing, excision of corns and sebaceous cysts are done.

e. Physiotherapy

Physiotherapy services are provided for a wide range of musculoskeletal painful disorders. Modalities available are MWD, SWD, U/S, TENS, IFC laser therapy traction unit, magnolia.

f. Laboratory services

Trained laboratory staff are conducting basic blood urine & stool tests during week days. Services of one NABL accredited laboratory are also available for carrying out specialised tests.

g. Pharmacy

Well equipped pharmacy (Allopathic & Homoeopathic) provides free reliable quality medicines to beneficiaries on doctor's prescription during OPD hours (8 AM to 8PM).

h. Radiology / X-ray facility

X-Ray pleophos-D, 300 MA Siemens available, X-rays done on all working days during OPD hours. Sonoline G-50 U/s machine Siemens ultrasound is available and ultrasounds are done once a week by visiting specialist

i. ECG services

24hours ECG services, including machine report, carried out by tranined staff.

j. Ambulance services

24 hours patient transport vehicle available.

k. Specialist OPD services

Expert specialists from AIIMS from various specialities visit the IIT Hospital in the evening 5.30 -7.30 pm

OTHER CENTRAL FACILITIES

In addition, several other central facilities during the given period located in various Departments and Centres are as mentioned below :

1. Rapid Prototyping: Can automatically construct physical models of Computer- Aided Design (CAD) data.
2. Super Computing Facility for Bio-informatics & Computational Biology.
3. MALDI/MS-MS:- MALDI/MS-MS houses QSTAR XL Pro system. A quadrupole LINAC collision cell is available in the system which follows the first mass filter and is used for efficient MS/MS fragmentation.
4. SEM:- The SEM Central Facility is equipped with following equipments:
   - ZEISS EVO Series Scanning Electron Microscope Model EVO 50
   - Bruker-AXS Energy Dispersive X-ray System (model Quan Tax 200). Ultra-microtome (Leica EM UC6).
   - Polaron Gold/Silver Sputter Coating unit.
5. High Resolution NMR Spectrometer.
6. ESCA/UPS/AES facility:- ESCA/UPS/AES facility installed in 2007 is used for surface characterization.
7. GC- MS System:- GC-MS System perform Qualitative and Quantitative measurement of organic molecules.
8. Glass Blowing Workshop.

New Initiatives

(April 1, 2013 - March 31, 2014)

NEW COURSES PROPOSED/INTRODUCED

During the period, the following new courses have been proposed/developed/initiated :

Department of Chemical

- Molecular Modeling of Heterogenous Catalytic Reaction for PG developed by Dr. M. A. Haider
- Petroleum Production Engineering, Petroleum Reservoir Engineering developed by Dr. Jyoti Phirani
- Structure, Transport and Reactions in Bionano Systems for Senior UG & PG (7xx) developed by Dr. Shalini Gupta, Dr. Gaurav Goel
- Electrochemical Conversion and Storage Devices developed by Prof. S. Basu, Dr. M. A. Haider, Dr. A. Shukla
- Electrochemical Methods developed by Dr. M. A. Haider, Prof. S. Basu, Dr. A. Shukla
- Principles of Electrochemical Methods developed by Dr. A. Shukla, Dr. M. A. Haider, Prof. S. Basu
- Introduction to Complex Fluids for Core for UG with advanced standing/DE for PG developed by Dr. Shalini Gupta, Dr. Gaurav Goel, Prof. R. Khanna, Dr. Sanat Mohanty
- Complex Fluids Technology for DE for PG/UG with advanced standing developed by Dr. Shalini Gupta, Dr. Sanat Mohanty
- Transport Phenomena in Complex Fluids Elective for PG/UG with advanced standing developed by Dr. Jayati Sarkar, Dr. Paresh Chokshi, Prof. R. Khanna, Dr. S.K. Pattanayek, Dr. Gaurav Goel
- Granual Materials for DE for PG/UG with advanced standing developed by: Dr. Jayati Sarkar, Prof. B. P. Mani, Dr. S. K. Pattanayek
- Simulation Techniques for Complex Fluids for Core for UG with advanced standing/DE for PG developed by Dr. Gaurav Goel, Prof. R. Khanna, Dr. Paresh Chokshi, Dr. Sanat Mohanty, Dr. Jayati Sarkar, Dr. S. K. Pattanayek
- Thermodynamics of Complex Fluids for Core for UG with advanced standing/DE for PG developed by Dr. Gaurav Goel, Prof. R. Khanna, Dr. Paresh Chokshi, Dr. Sanat Mohanty, Dr. Jayati Sarkar, Dr. S. K. Pattanayek

Department of Chemistry

- General Chemistry (CYL100) for UG Developed by Arunachalam Ramanan
- Functional Materials (CYL111) developed by Arunachalam Ramanan
- Applied Chemistry (CYL121) for UG developed by Arunachalam Ramanan

Department of Computer Science

- "Algorithmic Game Theory" which was taught as a Special-Topics-course in Theoretical Computer Science (CSL865) developed by Naveen Garg
- "Quantitative methods in Operations Research" as a special-topics-course in Compute Applications developed by Naveen Garg
- Information and communication technologies for development developed by Aaditeshwar Seth
- Complete design oriented approach to teaching computer architecture. Students built an entire processor from the transistor level developed by Smruti Sarangi
- Network & Systems Security developed by Huzur Saran designed
- Virtualization and Cloud Computing developed by Sorav Bansal
- Modern Parallel Programming developed by Subodh Kumar.
- Course on Operating Systems for NPTEL developed by Sorav Bansal

Department of Management Studies

- Social Media & Business Praxis developed by Dr. P. Vignesgwara

Department of Physics

- Spintronics (EPL446) (UG)
- Materials science and Engineering (EPL336) (UG)
- Vacuum Technology & Surface Science (EPL331) (UG)
- Solid State Physics (EPL104) (UG)

All courses developed jointly by the faculty of Physics Deptt.

Department of Electrical

- Wireless Optical Communications for PG developed by Prof. V.K.Jain
- Quantum Electronics (EEL738) for PG developed by Dr. Madhusudan Singh
- Photovoltaics (EEL739) for PG

Department of Textile

- Design and Manufacturing of Textile Structural Composites for UG developed by B. K. Behera

Centre for Biomedical

- BMV700 Biomechanical Design of Medical Devices

Amar nath and Shashi School

- SIV871 (Special Module in Computational Neuroscience)
- SIV889 (Special Module in Computer Human Interaction)

School of Biological Sciences

- SBL100 for UG – core course as part of new curriculum developed by All faculty

NEW MOUS SIGNED BY THE INSTITUTE

Institute has signed MoUs/ Agreements with Institutions/ organization in India and abroad. Currently there are 86 MoUs with foreign Institutions/ Organizations and 63 MoUs with Indian Institutions/organizations. The objectives of these MoUs include exchange of students and faculty, joint research activities and fellowships for training at doctoral and postdoctoral level etc.

A) The Institute has signed MoUs with the following institutions/ organizations :

- **National**
  1. DHI (India) Water & Environment Pvt. Ltd.
  2. JNU

- **International**

1. George Simon Ohm university of Applied Sciences, Nuremberg, Germany
2. eWater, Australia's Govt. owned water modeling organization, Canberra, Australia
3. Universidad Nacional De Colombia, Colombia
4. Toulouse University, France
5. INSA De Lyon, France
6. Tallinn University of Technology, Estonia
7. Tribhuvan University, Napal
8. Technische Universitata Munchen, Germany
9. City University of Hong Kong
10. Institute of Engineering, Tribhuvan University
11. TWAS-Unesco (Approved)
12. École de technologie supérieure (ÉTS), Montreal, Canada
13. University of Technology, Pretoria, South Africa (Approved)
14. University of New Castle Upon Tyne, UK
15. KAIST, Korea
16. University of Groningen, Netherlands
17. University of Nebraska, Omaha
18. University of Gothenburg, Sweden
19. Ghent University
20. Hiroshima University
21. Gothenburg University, Sweden
22. KTH, Sweden

B) Institutions of Chairs

The Industry and the alumni of the Institute have extended significant support to the Institute for its academic and research programmes by way of instituting chairs in various fields. As on date, 38 Chairs are functional at the Institute.

- Astra Microwave Dr. R.P. Shenoy Chair
- Bharti Airtel Industry Chair Professor
- Central Electricity Authority

C) Scholarships/Medals/Awards/Fellowships

To encourage and to provide financial assistance to needy students of the Institute, individuals, trusts and organizations have been instituting scholarships etc. At present there are 116 awards/ scholarships/medal being given at Undergraduate and Postgraduate levels. In addition the Institute has a "Loan Scholarship Scheme" which makes it more affordable for the students in comparison to taking loan from the banks.

Following scholarships have been approved during the period under report:

- IIIE Award
- Mr. & Mrs. Gadepalli Visveswara Rao Cash Prize
- Dorabala Annapoornama Award
- V Ranga Raju Memorial Freeship
- V.N. Vazirani Memorial Award (approved0
- H.R. Gulati Scholarship
- Bhagirathi-Bashisht Tiwari Award
- Leela Khushiram Award

D) New faculty research grant

To encourage the new faculty for developing research facilities in the area of their expertise, the Institute has so far allocated a sum of Rs. 310 lakhs.

BOOK PUBLISHED

- Dr. V. V. Buwa, Prof. S. Roy, "Three Phase Slurry Reactors"
- Dr. V. V. Ranade, "Multiphase Catalytic Reactors: Theory, Design, Manufacturing and Application", Zeynep Ilsen Onsan and Ahmet Kerim Avci, John Wiley, 2013
- Introduction to Molecular Engineering (2014), Ane Books and CRC Press, Germany (HMC)
- Basic Organometallic Chemistry (2nd Edition, 2013), University Press, Hyderabad (AJE)
- Dr. Smruti Ranjan Sarangi published a book on "Computer Organization and Architecture", published by McGraw Hill publishers.
- S.P. Singh, Production and Operations Management, Vikas Publication House, Delhi
- P.K. Jain, Shveta Singh and Surendra Singh Yadav, Financial Management Practices: An Empirical Study of Indian Corporates, Springer, New Delhi
- M. Y. Khan and P. K. Jain, Cost Accounting (Second Edition), McGraw Hill Education (India) Pvt. Ltd., New Delhi
- Sushil, The Flexible Enterprise, Springer, 2014
- Sushil, Flowing Stream Strategy, Springer, 2013
- Sushil, Physical Systems Modelling and Management Applications, New Age International Publication, Springer
- Shah, Suril Vijaykumar, Subir Kumar Saha and Jayanta Kumar Dutt, "Dynamics of Tree-type Robotic Systems", Springer Netherlands, 2013
- Edited by Abhijit Majumdar, Apurba Das, R. Alagirusamy & V.K. Kothari, "Process control in textile manufacturing", Woodhead Publisher U.K., ISBN 0 85709 027 5
- Das, D. and Pourdeyhimi, Composite Nonwoven Materials: Structures, Properties and Applications, B., Woodhead Publishing Ltd., UK, 2014 (Edited), ISBN: 9780857097705
- R.K. Nayak of Melborn Institute of Technology, Australia and B.K. Behera, Air Bag, Textile Progress, Textile Institute-Manchester, Volume 45, Issue 4, 2013
- Anand S. (2013) "Current Trends in Engineering Practice", Vol. III, Publishing Editor, AICTE-INAE
- A book was authored by M.K.G.Babu and K.A.Subramanian "Alternative Transportation Fuels: Utilization in Combustion Engines", ISBN-978-1-4396-7261-9, Publisher: CRC Press (Taylor & Francis Group), Published: July 2013
- Bhim Singh, D.T. Shahani and Arun Kumar Verma, "Neural Network Controlled Grid Interfaced Solar Photovoltaic Power Generation," IET Power Electronics vol.7, no.3, pp. 614-626, July 2013
- Arun Kumar Verma, Bhim Singh and D.T. Shahani, "New topology for management of bi-directional power flow between vehicle and grid with reduced ripple current at unity power factor," Int. Journal. Power Electronics, vol. 5, no. 3/4, pp.216–235, July 2013.
- Arun Kumar Verma, Bhim Singh and D.T. Shahani, "Challenges in Solar Photo-Voltaic (SPV) Grid Integration in Urban Areas," Electrical India Magazine. vol.53, no.10, pp. 60-79, Oct.2013.

- Varun Kumar, Manoj Kumar and Chandra Shakher, "Measurement of convective heat transfer coefficient along the surface of heated wire using digital holographic Interferometry" Appl. Opt. 53 (27), G73-G84 (2014).

MAJOR RESEARCH INITIATIVES/RESEARCH PROJECTS UNDERTAKEN

- ONGC Energy Centre, Mechanistic Studies on the Catalytic Decomposition of Sulfuric Acid in the I-Saycle for Hydrogen Production, 9 months starting from 25th Feb 2013. Funding Rs. 17.47632 Lacs (Dr. Sreedevi U.)
- Recipient of DST-EPSRC India-UK Collaborative Research Initiative in Advanced Manufacturing (4.5 Cr) (Prof. A. S. Rathore)
- Total S. A. France, Catalyst Loading and its Impact on the Performance of Trickle Bed Reactors, Nov 2012-Oct 2013. Funding Rs. 17.22 Lacs (Prof. K.D.P. Nigam, Prof. S. Roy)
- Pall Europe, Optimization of Chromatography Process Steps for purification of monoclonal antibody base therapeutics, 2013. Funding Rs. 40 Lacs (Prof. A. S. Rathore)
- HPCL and Centre for High Energy, Catalytic Decomposition of Methane to Hydrogen and Carbon Nano Fiber, 2013. Funding Rs. 51 Lacs (Prof. K.K. Pant)
- ONGC Energy Centre, Modeling of membrane electrolysis cell for Bunsen reaction and electro-electro dialysis unit for concentration of HIX solution, 9 Months start from Feb 2013. Funding Rs. 10.86 Lacs (Dr. A. Shukla)
- Loreal India Pvt. Ltd., Investigation of Foam Formation Kinetics, Stability and Characterization, 2013. Funding Rs. 1.1 Lacs (Dr. Shalini Gupta)
- Dr. Reddy's Laboratories, Aggregation of monoclonal antibody based therapeutics – effect of processing and storage, 2013. Funding Rs. 20 Lacs (Prof. A. S. Rathore)
- Nanomaterials exposures risks from contaminated edible plants
- Position and Personalize Advanced Human Body Models for Injury Prediction (RP02431)
- Design & Development of Electronic Personal Security Device
- Design & Development of an Assistive Device for Public Bus Access for the Visually Impaired
- Development of a Low-cost Electronics Refreshable Braille Display for the Visually Impaired
- National Programme on Perception Engineering- (NPPE) Phase II
- Microsoft Unrestricted Grant
- Mining Opinions from News sources for defense applications
- Research on knowledge representation and extraction of single event
- Affordable Refreshable Braille Displays Based on Shape Memory Actuation
- Smart Cane-Development Course for National and International dissemination.
- Inclusive innovation course and program
- Structured Sharing of Networks and Computer Resources in a Community & Devices
- Scaling up Multi -Document Summarization
- IBM Faculty Award
- Cyber Security
- To conduct ASME Human Powered Vehicle (HPVC) Contest at IIT Delhi, Prof. P.V.M. Rao, American Society of Mech. Engg.
- High-fidelity Simulations of Microscale Electrokinetic Flows, Dr. S.S. Bahga, IRD, IIT Delhi
- To Initiate Boing University Relationship Programme at the Institute and as a part of the Aerospace and Aeromodelling Activities among students, Dr. Amit Gupta, Boing International Corporation India Pvt. Ltd.
- To Initiate Boing University Relationship Programme at the Institute and as a part of the Aerospace and Aeromodelling Activities among students, Dr. S.S. Bahga, Boing International Corporation India Pvt. Ltd.
- Gap period assistantship to Mr. Rajat Subhra Das under the supervision of Prof. Sanjeev Jain, Prof. Sanjeev Jain, IRD, IIT Delhi
- Indo-US Fellowship to Dr. Nomesh B. Bolia in the area of Public Health on To Develop scheduling methods for diagnostics equipment taking relevant constraints in consideration, Dr. Nomesh Bhojkumar Bolia, INDO-US Science & Technoloty Forum
- Urban City Analysis to Measure its Resilliency and Strategically Improve Emergency Response, Dr. Nomesh Bhojkumar Bolia, Human Settlement Management Institute, HUDCO House
- Development of selected medical implants: Dental implants - Phase II, Prof. Naresh Bhatnagar, NMITLI, PPD, Council of Science & Industrial Research
- Investigation on capacity Deterioration in Lithium-Ion Batteries, Dr. Amit Gupta, DST
- Modelling the Interpaly of Hydrodynamic Slip and Electrokinetics in Micro-Nanochannels, Dr. Subhra Datta, DST
- Modelling and Analysis of the Impact of Forecasting Policies in Mitigating Supply Chain Disruptions, Dr. Vipul Jain, DST
- Characterization of Drying Kinetics of Food Materials Subjected to Convective Drying Model Development and Experimental Studies, Dr. Prabal Talukdar, CSIR
- Characterization of Drying Kinetics of Food Materials Subjected to Convective Drying Model Development and Experimental Studies, Dr. Vivekanandan Perumal, CSIR
- Development and fabrication of ultrasonic barrel cleaning device for artillery & AFV gun barrels, Dr. P.M. Pandey, Army Technology Board, Baroda
- Development of a Low-cost Electronics Refreshable Braille Display for the Visually Impaired, Prof.P.V.M. Rao, DST
- Development of a Low-cost Electronics Refreshable Braille Display for the Visually Impaired, Prof. M. Balakrishnan, DST
- Design and Development of Hybrid Bearing for Flywheel Wind Energy System, Dr. Harish Hirani, CSIR
- Improving Grinding Characteristics of Ti-6Al-4V using Nano Fluids under Minimum Quantity Lubrication Technique and Liquid Nitrogen Jets, Prof. P.V. Rao, Science and Engineering Research Board
- Improving Grinding Characteristics of Ti-6Al-4V using Nano Fluids under Minimum Quantity Lubrication Technique and Liquid Nitrogen Jets, Dr. S. Aravindan, Science and Engineering Research Board
- Selective Addition of Carbon Nanotubes in Graphitic Anodes and its Effect on the Performance of Lithium-Ion Cells, Dr. Amit Gupta, CSIR
- Development of forming limits of aluminium alloys in warm sheet forming for better failure prediction in FE analysis, Prof. D. Ravi Kumar, Science and Engineering Research Board

- Development of forming limits of aluminium alloys in warm sheet forming for better failure prediction in FE analysis, Dr. R.K. Pandey, Science and Engineering Research Board
- Effect of Wing Flexibility on Forward Propulsion lof a Plunging Membrane, Dr. Amit Gupta, Aeronautics R&D Board, Directorate of Aeronautic
- Position and Personalize Advanced Human Body Models for Injury Prediction, Prof. A. Chawla, European Union
- Position and Personalize Advanced Human Body Models for Injury Prediction, Dr. Subodh Kumar, European Union
- Position and Personalize Advanced Human Body Models for Injury Prediction, Prof. S. Mukherjee, European Union
- FMR investigations of spin dynamics of sputtered magnetic bilayers initiated by Prof. Sujeet Chaudhary, 2013.
- In-situ RHEED investigations of 2D epitaxial thin films of spin polarized Fe3O4 on TiN buffered Si (100) thin films by pulsed DC-magnetron sputtering initiated by Prof. Sujeet Chaudhary, 2013.
- Exchange bias and Magnetic Tunnel Junctions for Spintronics applications initiated by Prof. Sujeet Chaudhary, 2013.
- Synthesis and Characterization of Graphenes/Carbon nanostructures by Pulsed Laser Ablation initiated by Prof. V. D. Vankar (PI) and Dr. A.K.Shukla (Co-PI). (25/11/2013).
- Low Temperature Raman Spectroscopy of Carbon Nanostructures initiated by Dr. A.K.Shukla (PI) and Prof. V. D. Vankar (Co-PI). (17/7/2013).
- Nanocomposites of graphene and size selected Pd, Pt and Pd-Pt alloy nanoparticles for hydrogen sensing applications initiated by B. R. Mehta (PI), 2013.
- Kelvin probe microscopy studies of polymer oxide nanoparticle hybrid structures initiated by B. R. Mehta (PI), 2013.
- Study of graphene as top layer contact material for silicon solar cells by Prof. B. R. Mehta (PI), 2013.
- Third Generation solar cells initiated by Dr. Santanu Ghosh (PI), Prof. P. Srivastava (Co-PI), Prof. Casero (UMD, Spain), Dr. Alessandro (CMAM, Spain), June 2013.
- On-line H detection and in-situ structural investigations of silicon nitride based solar cells initiated by Dr. Santanu Ghosh (PI), Dr. P. Srivastava (Co-PI), June 2013.
- 'Development of Personal Protection Systems using Shear Thickening Fluids' funded by DRDO. Joint research initiative by Polymer, Textile and Chemical Engineering departments/centre. Total grant: Rs 493 Lakhs.
- PI: Prof. Anup Ghosh, Co. PI: Abhijit Majumdar, B. S. Butola (Textile) and Sudip Patnaik (Chemical)
- "Development of Multifunctional Polyolefin-Nanoclay Hybrid
- Nanocomposites" funded by GAIL (India). Total Grant: 158.11 lakhs. PI: Prof. Mangala Joshi, Co. PI: Dr. B S Butola
- Development of UW Vector Sensors.
- Signal processing for high range resolution CTFM technique.
- Gallium Nitride RF power amplifiers.
- Initiation of Capillary electrophoresis microchip and Lab-on-a-chip medical diagnostic device development
- Initiation of Laser microfabrication research
- Orthodontic device research initiation.
- Medical imaging technology research initiation.
- Cancer diagnostics research initiative
- Research going on to develop a mobile unit for biogas upgradation and bottling
- Developing system for CO2 capturing and methane loss minimization in existing water scrubbing based biogas upgradation and bottling system
- Utilization of paddy straw for biogas production using hydrothermal pretreatment.
- Developing cost-effective sanitation products and technologies
- Rural Housing Knowledge Network project funded by Ministry of Rural Development, Govt of India undertakes training programmes for officers of State Government Rural Housing Departments
- Neurosurgery Training collaborated with AIIMS
- Assistive Technologies with Saksham Trust, Phoenix Medical, Kritikal Solutions
- IoT & Advance Technologies with ILS Tech & Kripalani Foundation
- BSL3 laboratories to pioneer research in the areas of Infectious diseases & Non-communicable disorders.
- The Grant agreement of Rs. 1991.35 Lakhs between Kusuma Trust,UK and KSBS, IIT Delhi has been extended till Dec 2014
- A research Project entitled "Understanding the Molecular Mechanism of Host Cell Interaction by Hepatitis a Virus (RP02766)" of Rs. 45.00 Lakhs was sanctioned to Dr. Manidipa Banerjee (PI) and Dr. Archana Chugh (Co-PI) by DBT w.e.f 28/06/13
- A research Project entitled "Regulation of Leishmanial Flagellar Motility (RP02773)" of Rs. 55.00 Lakhs was sanctioned to Prof. C. S. Dey by SERB, DST w.e.f. 11/07/13
- A research Project entitled "Identification of Chaperone Binding Region in the Aggregation Prone Protein Maltodextrin Glucosidase, which Undergoes GroEL/GroES Assisted folding (RP02777)" of Rs. 8.14 Lakhs to Prof. Tapan K. Chaudhuri by CSIR w.e.f 02/08/13
- A research Project entitled "Characterisation of Cell Penetrating Peptides and Antimicrobials Against Plant Pathogens (RP02783)" of Rs 23.30 Lakhs was sanctioned to Dr. Archana Chugh (PI) and Dr. V. Perumal (Co-PI) by DBT w.e.f 05/08/13
- A research Project entitled "GroEL- GRoES Assisted Folding of Multiple Proteins in Vivo and Invitro (RP02767)" of Rs. 28.9966 Lakhs was sanctioned to Prof. Tapan K. Chaudhuri by DST w.e.f 14/08/13
- A consultancy Project entitled "Study of the Mechanism and Performance of the Anti-Scaling Technology (FT/05/1698/2013)" of Rs. 04.50 Lakhs was sanctioned to Prof. Aditya Mittal by Hira Group Chhattisgarh w.e.f 16/09/13
- A research Project entitled "Investigating the Role of Gelsolin as Common Cellular Player for Modulating Amyloid Load and Neurodegeneration (RP02820)" of Rs. 19.55 Lakhs was sanctioned to Dr. B. Kundu by DBTw.e.f. 09/10/13
- A research Project entitled "Direct Detection of Enteric Fever in Blood by Evanescent Wave Optical Illumination (RP02823)" of Rs. 83.19 Lakhs was sanctioned to Dr. V. Perumal by DBT w.e.f. 24/10/13
- A consultancy Project entitled" Anti-heaptitis B virus activities of CFT in a cell culture model – a pilot study (FT/03/1708/2013/2369)" of Rs. 1.94 Lakhs was sanctioned to Dr. V. Perumal by Jammi Pharmaceuticals, Chennai w.e.f. 12/11/13
- A research Project entitled "Role of Nuclear Receptor Corepressor-1 (NCOR1) in Regulating Energy Homeostasis and Inflammatory Responses in Cell Culture Models of Muscle and Pancreatic Beta-Cells (RP02848)" of Rs. 24.00 Lakhs was sanctioned to Prof. C.S. Dey by SERB w.e.f. 25/12/13
- A research Project entitled "Development of PAT Platform for Production of a Therapeutic Protein Angiogenin (RP02850)" of Rs. 254.34Lakhs was sanctioned to Prof. James Gomes (PI) and Dr. Manidipa Banerjeee (Co-PI) by SERB w.e.f. 07/01/14
- A research Project entitled "Structural and Functional Characterization of Chikungunya virus for the effective Inhibitor and Drug Screening (MI01101)" of Rs. 1.00 Lakh was sanctioned to Dr. Ashok Patel by IIT Delhi under Research Grant for New faculty Scheme w.e.f 29/01/2014

The Year in Perspective

(April 1, 2013 - March 31, 2014)

Glimpses of various activities during 2013-14

Glimpses of various activities during 2013-14

Student Life in the Campus

Glimpses of various activities during 2013-14

Glimpses of various activities during 2013-14

Research at the core!

Lab activities at IIT Delhi

Glimpses of various activities during 2013-14

Inaugural Function of IIT Delhi Extensions at Haryana

Glimpses of various activities during 2013-14

Glimpses of various activities during 2013-14

6. Research & Development

(April 1, 2013 - March 31, 2014)

Research Thrust

Atmospheric Sciences, Embedded Systems, Environmental Science & Engineering, Rural Industrialization, Bioinformatics, Nanotechnology, Fibre Optics and Optical Communications, Biotechnology, Bio-catalysis, Smart and Industrial Textiles, Transportation, Photo-thermal energy conversion, Material Science, Photo-acoustic Microscopy, Power Technology, Signal processing, Opto-electronics, Computer Science, Computer Aided Design & Manufacturing, Smart Buildings and Infrastructure, Artificial Intelligence and Robotics

Academic & Sponsored Research

(April 1, 2013 - March 31, 2014)

ACADEMIC RESEARCH

The academic research carried out by the students for the Ph.D. degree, the final semester major project included in the four-year B.Tech. programme, the five-year integrated M.Tech. programmes, and the four-semester M.Tech./ M.S.(R)/M.Des. programmes make a significant contribution to the research output.

The principal source of academic research, however, continues to be through Ph.D. research projects. With a total of 1974 students enrolled for a research degree during the year under review, the emphasis on and commitment to academic research is evident. During the two semesters of 2013-2014, 356 candidates were admitted out of which 191 were full-time Institute scholars with the remaining 165 belonging to other categories like sponsored, part-time etc. A total of 188 theses were approved for the award of Ph.D. degree.

IIT Delhi faculty remain engaged in publishing their research results in various journals, Conferences and Seminar proceedings. The number of publication along with citation and h-index for the last 5 years is stated below.

Year	No. of Publications	No. of Citations	h-index
2014	1399	1649	12
2013	1589	1611	12
2012	1350	611	08
2011	1339	2098	12
2010	1153	4460	24

Source: Scopus as on 21st March 2014

SPONSORED RESEARCH

Along with teaching and academic research leading to doctoral degree, IIT Delhi gives high priority to research and development projects sponsored by outside national and international agencies and user organizations. The Institute has as one of its cardinal guiding principles continuous, and meaningful interaction with the world of science & technology and industry.

INDUSTRIAL RESEARCH AND DEVELOPMENT UNIT (IRD)

The Industrial Research & Development (IRD) Unit has been specifically set up in the Institute to provide specialised administrative and managerial support for the operation of Sponsored Research Projects, Consultancy Jobs and other related R&D activities. Over the years, the institute has set up many modern laboratories and supporting infrastructure through these projects.

During April 1, 2013 to March 31, 2014, 150 new sponsored research projects with a funding of about Rs. 68.65 crores were undertaken. In addition, 430 consultancy jobs worth Rs. 27.31 crores and 40 miscellaneous projects worth Rs. 5.80 crores were also undertaken.

Under the scheme called Summer Undergraduate Research Award (SURA), the students are required to submit the project proposals in association with identified Faculty of the Department/Centre to act as an Administrative Facilitator and a Guide. During the year 2014, 32 SURA projects have been selected to be undertaken by the undergraduate students during the summer vacations of 2014.

IRD Unit plays an important role by providing a one-time grant of upto Rupees One Lakh to new faculty member who joins the Institute. This assistance is being given to the new faculty so that they can initiate new projects, which may subsequently be submitted to various funding agencies.

Assistantships/Fellowships are provided by IRD to the Ph.D. students during 5th year. It has now been decided to extend such support in the form of Gap period assistantship for both M.Tech./MS(R) and Ph.D. students who are drawing their fellowship/assistantship from the projects. These assistantships will be provided to the students once the projects get over and there is no other project to pay them assistantship. M.Tech/MS(R) students can be supported for a maximum gap period of six months and Ph.D. students would be supported for a maximum gap period of one year.

All Research scholars can be awarded a travel grant under "Research Scholar Travel Award" (RSTA) upto a maximum of Rs. 80,000/- from Research Promotion Fund, subject to the following:

- The assured grant would be available to research scholars to attend and present a paper in an international conference of repute once during their stay at IIT Delhi; based on the proof that they have already applied to at least two other funding agencies for supporting their travel.
- The assured grant implies that in case they do not get grant from other agencies, they would still be able to claim reimbursement for travel and other conference related expenses subject to a maximum of Rs. 80,000/- per awardee.
- The Institute would support 100 such conference travels in one financial year through this scheme.
- This would also imply support to 100 students under the RSTA scheme.

Research Projects & Consultancy

(April 1, 2013 - March 31, 2014)

Institute has been organizing Open House to exhibit an extensive collection of innovative research and product development projects since last eight consecutive years. The ninth edition of Open House was held successfully on 20th April, 2013.

HIGHLIGHTS (2013-14)

Some important highlights about research are:

- 150 Sponsored Research Projects with a total funding of Rs. 68.65 crores and 40 Miscellaneous Projects worth Rs. 5.80 crores were undertaken.
- 430 Consultancy Assignments worth Rs. 27.31 crores were undertaken by IRD Unit. Besides, 72 Technology Development Projects/Contract Research Projects worth Rs. 14.11 crores and 41 HRD Programmes with a value of Rs. 2.88 crores were undertaken/organized by FITT.
- 31 International Sponsored Research Projects and Consultancy Jobs were undertaken.
- 32 UG Projects have been selected under the Summer Undergraduate Research Award (SURA) scheme for the year 2014.
- 25 faculty members who joined the Institute during the year received a research grant of upto Rs. 1 lakh each under the Research Grant for New Faculty (RGNF) scheme of IRD.
- Scholarship is provided by IRD, in exceptional cases, to the Ph.D. scholars after completion of 4 years and until the end of 5th year. IRD spent Rs. 97.96 lakh (approx.) on these scholarships during the year 2013-14

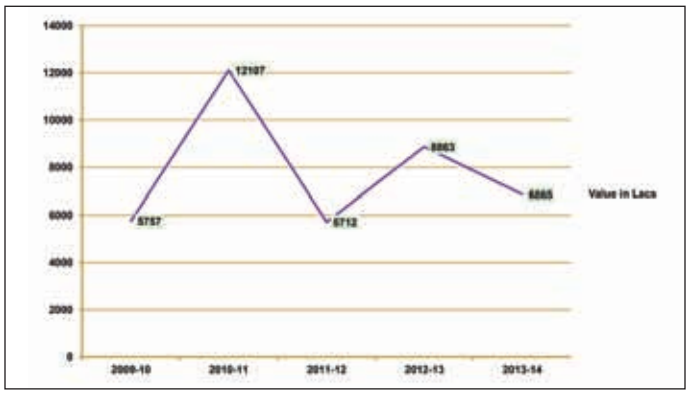
The trend in research funding and their number for last five years is shown in Table I & Fig. I.

Table I: Statistics of Sponsored Research Project

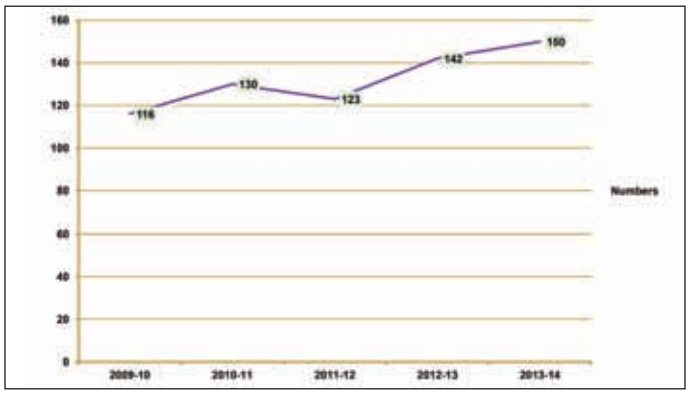
Financial Year	Sponsored Research Projects	
Year	Numbers	Value in Rs. Lacs
2009-10	116	5757
2010-11	130	12107
2011-12	123	5712
2012-13	142	8863
2013-14	150	6865

Fig. I: Trends in Sponsored Research Projects

(a) in Value

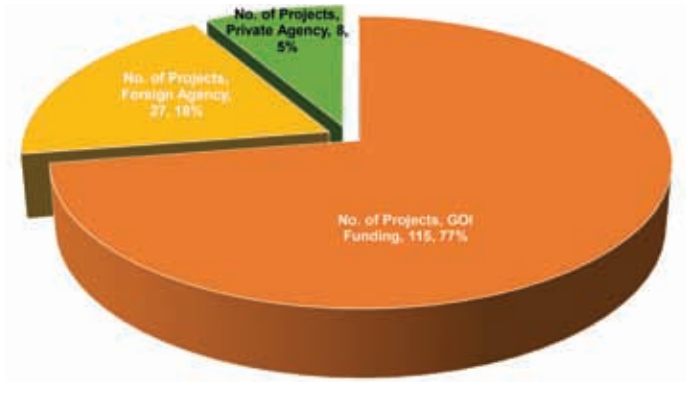


(b) in Numbers



Funding agency wise break-up of Sponsored Research Projects is given in Table II. A pie chart showing distribution of research projects is given below:

Fig. II: Funding Agency-wise Break-up of Sponsored Research Projects undertaken during 2013-14



Below is the list of members of Industrial Research and Development Board.

INDUSTRIAL RESEARCH AND DEVELOPMENT BOARD (2013-14) - As on 31.3.2014

Suneet Tuli, Chairman	Prem Kalra	P. Goyal (Ms.)	Anand Srivastava
S.N. Singh	Bhim Singh	N. Karmakar Gohil (Ms.)	Avinash Gupta
S.K. Koul	Purnima Singh (Ms.)	T.S. Bhatti	G.S. Kapur
Ashwini K. Agrawal	Mahim Sagar	B.K. Satpathy	D.N. Singh
S.V. Veeravalli	Aparna Mehra (Ms.)	A.K. Agarwala	Ajay Pradhan
Saroj Mishra (Ms.)	Anjan Ray	Jayashree Bijwe (Ms.)	Mukesh Mohania
Sanat Mohanty	Neeraj Khare	S.N. Naik	J.S. Saini
A.J. Elias	B.K. Behera	Pragya Jain (Ms.)	Anil Wali
A.K. Jain	Ananjan Basu	Salil Singhal	V.K. Vashistha, Secretary

Table II : Funding agency-wise Break Up of Sponsored Research Projects Undertaken During 2013-14

Funding Agency	No. of Projects	Amount (`Lacs)
Aeronautical Development Agency	1	12.95
Aeronautics R & D Board	1	14.31
Akshi Technologies	1	8.36
Army Technology Board	2	55.00
Bharat Heavy Electricals Ltd.	1	29.09
Board of Research in Nuclear Sciences (DAE)	2	54.02
CISCO	1	19.80
C S R Technology (India) Pvt. Ltd.	1	12.24
Container Corporation of India Ltd.	1	27.00
Council of Scientific & Industrial Research	10	77.19
Directorate of Extramural Research & Intellectual Property Rights	3	147.14
DuPont Center for Collaborative Research & Education, USA	1	5.12
Defence Materials & Stores R & D Establishment	1	10.00
Defence Research & Development Orginization, Delhi	4	72.43
Department of Atomic Energy	1	15.80
Department of Biotechnology	14	570.34
Department of Science & Technology (DST)	34	1059.30
European Commission	1	86.29
European Union	1	225.92
GAIL (India) Limited	1	85.58
GSMA, UK	1	19.20
Google India Pvt. Ltd	1	1.80
Indo-US Science & Technology Forum	3	107.19
Indian Council of Agriculture Research	1	46.17
Indian Council of Medical Research	1	14.67
Indian Council of Social Science Research	2	54.38
Indian National Centre for Ocean Information Services	1	91.99
Indo French Centre for Applied Mathematics, France	1	9.97
Instruments Research & Development Establishment	1	44.44

Intel Labs University Research Office (URO)	1	40.27
International Development Research Centre, Canada	1	114.64
International Division, DST	4	50.85
Microsoft India (R&D) Pvt. Ltd.	1	7.00
Ministry Of Defence	1	9.96
Ministry of Chemicals & Fertilizers	1	600.00
Ministry of Communications & Information Technology	2	308.82
Ministry of Human Resource Development	1	100.00
Ministry of Information Technology	1	105.36
Ministry of New and Renewable Energy	1	482.40
Omidyar Network Fund Inc., USA	1	127.30
New Millennium Indian Technology Leadership Initiative, CSIR	1	296.52
National Academy of Sciences, USA	1	68.13
National Buildings Construction Corporation Ltd.	2	41.64
Road Traffic Injury Research Network, Mexico	1	15.84
Saint Gobin Research India Limited	1	15.00
Science and Engineering Research Board	19	647.30
Snow & Avalanche Study Establishment	2	18.48
Solid State Physics Laboratory	1	9.90
Space Application Centre, ISRO	1	39.22
TERI	1	19.20
Tata Steel Ltd.	1	55.88
Terminal Ballistics Research Lab	1	493.20
The Korean Institute of Science & Technology Information, Korea	1	54.90
UK-India Education & Research Initiative (UKIERI)	2	38.21
University Grants Commission	4	74.25
University of Washington, USA	1	49.04
Yahoo Labs, USA	1	4.20
Total	**150**	**6865.20**

Some of the major projects undertaken during the period are listed below:

Table III: Financial Outlay of Some of the Major Projects during 2013-14

Name of the Project	Sponsoring Agency	Financial Outlay in Rs. Lacs
Centre of Excellence for Advanced Polymeric Materials	Ministry of Chemicals & Fertilizers	600.00
Development of Personal Protective Systems using Shear Thickening Fluids	Terminal Ballistics Research Lab	493.20
Demonstration & Field Trails of Hydrogen Fuelled 3 Wheelers in New Delhi	Ministry of New and Renewable Energy	482.40
Development of selected medical implants: Dental implants - Phase II	NMITLI, PPD, Council of Science & Industrial Research	296.52
National Programme on Perception Engineering- (NPPE) Phase II	Ministry of Communications & Information Technology	260.82

Position and Personalize Advanced Human Body Models for Injury Prediction	European Union	225.92
Inclusive innovation course and program	Omidyar Network Fund Inc.	127.30
Proposal for a Low-cost Wild Animal Protection System Through Animal Presence and Movement Detection Using Wireless Sensor Network	Department of Science & Technology	116.57
The Impact of Microloans, Mobile Phones and Business Training on Microenterprises Owned by Women in Developing Countries: An Experimental Study in Coimbatore, India	International Development Research Centre, Canada	114.64
Mobile Broadband service Support Over Cognitive Radio Networks	Ministry of Information Technology	105.36
Centre for Excellence in Low Power Design on Nanoscale Devices, Circuits and Systems	Ministry of Human Resource Development	100.00
Development of an Improved Prediction system for storm surges and its Inland Inundation along the Indian Coasts	Indian National Centre for Ocean Information Services	91.99
US-India Consortium for Development of Sustainable Advanced Lignocellulosic Biofuel Systems (SALBS)	Indo-US Science & Technology Forum	87.58
Eco-Innovative, Safe and Energy Efficient Wall Panels and Materials for a Healthier Indoor Environment	European Commission	86.29
Development and Processibility of Polyolefins (PE & PP) for Human Healthcare Applications	GAIL (India) Limited	85.58
Direct Detection of Enteric Fever in Blood by Evanescent Wave Optical Illumination	Department of Biotechnology	83.19

Industrial consultancy is another significant area of activity of the Institute. The nature and extent of the industrial consultancy projects undertaken by the Institute is an index of its credibility with the industry and is symbolic of the relevance of a centre of excellence in the context of nation's socio-economic development. The consultancy jobs undertaken during last five years is shown in Table IV.

Table IV: Consultancy Jobs Undertaken During Last Five Years (2009-10 to 2013-14)

Financial Year	Consultancy Jobs (IRD)		Technology Development Projects/ Contract Research (FITT)		HRD Programmes (FITT)		TOTAL
	No.	Value in Rs. Lacs	No.	Value in Rs. Lacs	No.	Value in Rs. Lacs	Value in Rs. Lacs
2009-10	557	1875	82	991	36	153	3019
2010-11	519	2250	71	872	46	145	3267
2011-12	420	2110	83	936	50	112	3158
2012-13	348	1829	61	898	48	199	2926
2013-14	430	2731	72	1411	41	288	4430

COLLABORATIVE RESEARCH

The Institute is actively involved in collaborative programmes with national and international organization/ universities to remain at the forefront of scientific and technological developments and to share knowledge. A large number of collaborative Research Projects are under operation with Institutes/Organizations of Austria, Australia, Brazil, Bulgaria, Canada, Denmark, European Commission, France, Germany, Hungary, Ireland, Israel, Italy, Japan, Korea, Mexico, Portugal, Russia, Slovenia, Spain, Sweden, Switzerland, UK, USA, etc. Major research activities have also been undertaken in the areas of national importance.

Research Projects & Consultancy

During the year under report, the Institute has undertaken 31 new Collaborative Projects/Consultancies, with International funding. The country-wise breakup of the ongoing International Sponsored Research Projects during the year is:

Country	Nos.	Country	Nos.
Austria	1	Japan	3
Australia	2	Korea	2
Brazil	2	Mexico	1
Bulgaria	1	Portugal	1
Canada	3	Russia	1
Denmark	1	Slovenia	2
European Commission	2	Spain	1
France	3	Sweden	2
Germany	6	Switzerland	1
Hungary	1	UK	33
Ireland	3	USA	17
Israel	1	**Total**	**93**
Italy	3		

Some of the major International Sponsored Research Projects undertaken during the year 2013-14 are:

NAME OF THE PROJECT

1. Indo-US Fellowship to Dr. Nomesh B. Bolia, Department of Mechanical Engineering, in the area of Public Health to Develop Scheduling Methods for Diagnostics Equipment taking Relevant Constraints in Consideration - INDO-US Science & Technology Forum (University of North Carolina)
2. Singular Phenemena in Reaction Diffusion Equations and in Conservation Laws – Indo-French Centre for Applied Mathematics (Universite de Pau et des Pays de l'Adour, France)
3. US-India Consortium for Development of Sustainable Advanced Lignocellulosic Biofuel Systems (SALBS) - INDO-US Science & Technology Forum (University of Florida)
4. Trend Identification on Twitter - Yahoo! Labs, USA
5. Investigating Modulation of miRNA expression in the Hypoxic Stem Cell Niche - DST-UKIERI Thematic Partnership (Keele University, UK)
6. Design and Analysis of Optical Microstructured Fibre-Based Terahertz Source for Transmission and Applications - UKIERI UK-US-India Trilateral Research in Partnership (City University, UK and University of Rochester, USA)
7. Receptor Modelling of Particulate Air Pollutants - UKIERI UK-US-India Trilateral Research in Partnership (University of Birmingham, UK and Desert Research Institute, USA)
8. The Impact of Microloans, Mobile Phones and Business Training on Microenterprises Owned by Women in Developing Countries: An Experimental Study in Coimbatore, India - International Development Research Centre, Canada
9. Structured Sharing of Networks and Computer Resources in a Community of Devices - Intel Corporation, USA
10. Eco-Innovative, Safe and Energy Efficient Wall Panels and Materials for a healthier Indoor Environment - European Commission (University of Bath, UK)
11. Developing a Framework of Consumer Awareness on RF Exposure for Telecommunication Industry - GSM Association, UK
12. Nano-oxides with Controlled Size and Morphology Modified with Noble Metals (Pt,Pd,Ru) for Purification Processes (Complete Oxidation of Volatile Organic Compounds and Prox Process) – DST (Indo-Bulgaria Joint Research Project – Institute of Catalysis, Bulgarian Academy of Science, Bulgaria)
13. Scaling up Multi-Document Summarization - University of Washington, USA
14. DuPont Young Professor Award-2013 - E.I. DuPont De Nemours & Company, USA
15. Design and Development of Freeform Optics for Imaging and Non-Imaging Applications – Indo-German Joint Research Project (Technical University of Ilmenau, Germany)
16. Networked Infrastructure for the Remote Monitoring of Patients – Indo-UK Joint Project (Loughborough University, UK)
17. Fabrication of Vertically Standing GaN Nano-Rods and Nano-Wires using Nano-Masking and Etching Techniques for Applications in Nano-PN Junctions and Nano-LEDs – Indo-German Joint Research Project (Max Planck Institute for the Science of Light, Germany)

18. Fecal Sludge and Human Urine Reuse in Agriculture-Opportunities for Addressing Phosphorus Needs in India - National Academy of Sciences, USA
19. Position and Personalize Advanced Human Body Models for Injury Prediction – European Union (University of Lyon, France)
20. Fire Centre for Advancing Research and Education in Structural Fire Engineering - INDO-US Science & Technology Forum (Michigan State University)
21. Improving Road Safety in India and the UK - Indepth Investigation and Analysis of Crashes Involving Vulnerable Road Users - UGC-UKIERI Thematic Partnership-2013 (Loughborough University, UK)
22. Imaging Technologies to Understand Bioseparations - UGC-UKIERI Thematic Partnership-2013 (University College London, UK)
23. A Comparative Study of Hierarchical Materials for Biomedical and Lightweight Applications: Manufacture, Characterization and Modeling - UGC-UKIERI Thematic Partnership-2013 (University of Southampton, UK)
24. Electro-optical Properties of Magnetically Modulated Graphene - UGC-UKIERI Thematic Partnership-2013 (University of Bath, UK)
25. Inclusive Innovation Course and Program - Omidyar Network Fund Inc., USA
26. Research on Knowledge Representation and Extraction of Single Event - The Korean Institute of Science & Technology Information, Korea
27. Estimating Risk to Road Users & Impact of Active Traffic Calming Measures on Vehicular Speed in Highway Work Zones - Road Traffic Injuries Research Network, Mexico

CONSULTANCY ASSIGNMENTS WITH INTERNATIONAL ORGANISATIONS

The Institute has been undertaking Consultancy Assignments with International Organisations like Bulk Testing International, France; Japan Automobile Research Institute, Japan; U.S. Air Force Research Laboratory (AFRL), Asian Office of Aerospace R&D, Japan; Nippon Steel & Sumitomo Metal Corp., Japan; LG Electronics Inc, Korea; Panchkanya Plast (P) Ltd., Nepal; Common Fund for Commodities, Netherlands; Escom Research and Innovation Department, South Africa; Uppasala University, Sweden; National Property Board, Sweden; McLellan and Partners Ltd, UK; Marvel Chemicals Ltd, UK; Aquatech International Corp., USA; Fushi Copperweld Inc., USA; PPG Industries Inc., USA; United Technologies Corp./Pratt & Whitney, USA; McAfee Inc., USA; Safe Water Network, USA; Gulf Coast Technical Service, USA; Corning Inc., USA; Biomorphic VLSI Inc., USA; Institute for the Future, USA; Yardi Systems, USA and Universities/Institutions abroad.

ABOUT OTHER ACTIVITIES

Besides handling Direct Fellowships sponsored by various funding agencies, sponsored Chairs, PAC/Expert Committee Meetings, new faculty grants, PDF management, DDF/CDF Management, IRD has also undertaken the following activities during 2013-2014:

1. National Workshop on Nitride Semiconductors (6 April, 2013)
2. Course on Naval Operations Analysis-III (3 June – 17 August, 2013)
3. Resonance India Program 2013 (Neuroscience Summer School) (24 June – 6 July, 2013)
4. Workshop on Computational Intelligence Theories, Applications and Future Directions (13-14 July, 2013)
5. Regional Workshop under Pedagogy Project of IIT Kharagpur (25 October, 2013)
6. International Conference on Excellence in School Education (16-17 November, 2013)
7. Conference- BioWorld 2013: Computational Biology in Disease and Disorder (9-11 December, 2013)
8. Workshop on Mushroom Technology – Present Scenario and Future Prospects in India (16-18 December, 2013)
9. Symposium on Emerging Trends in Glycoscience and Glycotechnology (8-10 January, 2014)
10. ASME Human Powered Vehicle Contest (17-19 January, 2014)
11. Indo-German Joint Scientific Workshop on Water and Wastewater Management for Sustainable Development (30-31 January, 2014)
12. India-UK Seminar on Computational Photonics: Plasmonics, Nano and Biophotonics (1-3 March, 2014)
13. Indo-Dutch Workshop on Developing a Research Agenda in Communications and Computing Collaboration (19-20 March, 2014)
14. INSPIRE Faculty Awards
15. DBT National Bioscience Award
16. IBM Faculty Award
17. P.C. Ray Fellowships to two Myanmar Researchers to work in India
18. Boeing University Relations Programme
19. Setting up of International Institute of Technology Research Academy in Mauritius
20. Digital Hampi Programme

Foundation for Innovation and Technology Transfer (FITT)

(April 1, 2013 - March 31, 2014)

FITT is an autonomous organization established by and at the Indian Institute of Technology Delhi (IIT Delhi) as a Registered Society in 1992. As a leading technology transfer entity, FITT is mandated to be an effective interface with the industry to promote and sustain commercialization of science and technology. For over two decades now, FITT has been in a mission mode towards devising innovative ways to create partnerships and linkages with business and the community to enable knowledge transfer for societal good and economic development. The successful outreach and extensive S&T collaborations at IIT Delhi by the team at FITT would not have been possible without active backing by the Institute academics.

The expansive roles of FITT include: working with business, fostering technology development, consultancy, collaborative R&D, technology commercialization, development programs, corporate membership etc. These roles are necessitated by the key agenda of the Foundation to showcase and transfer the Institute's "intellectual ware" to industry and also instill industrial relevance in teaching and research at IIT Delhi.

- Since early days, FITT has secured the status as a Scientific and Industrial Research Organization (SIRO) from the Government by virtue of its charter to implement, inter-alia, industrial R&D projects. During FY 2013-14, 72 technology development / transfer projects worth Rs.1411.09 lakh have been contracted at FITT.
- FITT manages the Institute's IP and IPRs. During the last financial year 26 invention disclosures were processed, out of which 16 cases were approved for filing patents and 5 licensing deals were closed. To augment its outreach and technology commercialization efforts, FITT has entered into MoUs / Agreements with specialist outside agencies. Besides enabling regular industry academia meetings, FITT organized a number of visits by IIT Delhi faculty to industrial units in order to assess their R&D needs so as to initiate industry-relevant R&D programs at the Institute. FITT also instrumented the visits of several overseas companies / delegations which helped in fruitful exchanges between the visiting delegates and the academic community of the Institute.
- FITT addresses capacity building needs in the industry. During FY 2013-14, 41 Professional Development Programs were organized, primarily for industry participants for a gross value of Rs. 287.68 lakh.
- The "Professional Candidate Registration" has been adopted towards outreaching the academic courses at the Institute amongst the targeted segments of industry, research and academic establishments. Through this program, suitably qualified professionals can undertake relevant semester-long course modules here at IIT Delhi and thus enhance their knowledge and skill set. 91 candidates participated in this program during the two semesters of the academic year 2013-14.
- As an avenue towards techno-entrepreneurship, FITT has enabled the establishment and operation of a thriving Technology Business Incubation Unit (TBIU) on the campus. It is a flagship institute program. The objective of the TBIU is primarily to promote partnership with new technology entrepreneurs and start-up companies, and also serve as a medium of technology transfer. 10 companies are presently resident at the TBIU. Out of 40 companies admitted so far in the incubator since its inception in the year 2000, 16 companies have started their upscaling/commercial operation after completing their incubation at the Institute and are reported to be growing at a steady pace. The TBIU companies are working in the technology domains of IT, Biotechnology, Engineering design, Cleantech etc. FITT is also collaborating with Wallonia Trade and investment Agency (AWEX) of Belgium towards internationalization of innovation led technology start-ups in the country.

FITT has been at the forefront in managing several innovation and entrepreneurship programs in the country as a nodal agency in several Government schemes. The Ministry of Micro, Small and Medium Enterprises(MSME), Government of India has extended grants to FITT for promoting and supporting innovation amongst micro and small enterprises leveraging the knowledge resources at IIT Delhi. Seed support in the broad area of ICT is also forthcoming under the Department of Information Technology (DIT) program – "Technology Incubation and Development of Entrepreneurs" (TIDE) scheme. FITT is also a beneficiary of the grant assistance of Rs.1.00 cr. from the Technology Development Board (TDB) for the specific purpose of providing early stage financial support to start-up units incubated at IIT Delhi's TBIU. More recently, FITT has secured the coveted status of a BIG Partner of BIRAC (DBT) towards implementing their Biotechnology Ignition Grant (BIG) scheme in the country.

FITT has added 12 new corporate members in the FY-2013-14 representing small/medium/large scale industrial and R&D units. Corporate members receive preferential treatment in matters of collaboration with the Institute in addition to information and technical services that FITT provides through the Institute's resources. FITT's gamut of services and activities include:

Foundation for Innovation and Technology Transfer

- Transfer of technology relating to proven R&D outputs
- Research partnership with industry for technology development and its commercial applications
- Innovative problem solving consultancy with industry clients
- Information support service to industry and R&D organizations
- Specialist development programmes
- Corporate membership of FITT
- Facilitate funding for the development of innovative ideas of commercial implications

Deliberations at the Brain Storming meet towards establishment of S&T Parks at IITD

Examples of R&D Collaborators:

BHEL, Bangalore
SRF Ltd., Chennai
Corning Inc., USA
Samsung India Ltd., Noida
GlaxoSmithKline, Gurgaon
GE India Tech, Bangalore
PALL Corporation, France
GAIL (India) Ltd., New Delhi
Dr. Reddy's Laboratories Ltd.

Shri M. Shashidhar Reddy, Vice Chairman NDMA at the inauguration of the workshop on CRZ Management at IIT Delhi

Partners: Innovation / Entrepreneurship

ICICI - Trinity program
Indian Angle Network (IAN)
Technology Development Board (TDB)
POSOCO Power System Award (PPSA)
Department of Electronics and Information Technology (DeitY), Govt. of India
Department of Scientific and Industrial Research (DSIR), Govt. of India
Ministry of Micro, Small and Medium Enterprises (MSME), Govt. of India

POSOCO Power System Award (2014) ceremony at FITT

Star-up Success 2013-2014

Gram Vaani Community Media Pvt. Ltd.

- Since its inception in December 2008 Gram Vaani Community Media Pvt. Ltd. (Dr. Aaditeshwar Seth, CEO; Prof. Huzur Saran, CSE, IIT Delhi) has developed a transmission box for community radio broadcast network and is working at the pilot scale. Its services include community engagements, interactions, voting, education/ knowledge dissemination to the rural community etc. This venture has raised an equity investment from the Indian Angel Network and Digital News Ventures to grow their scale of operations and exited the incubator in June, 2013.

Simplyfeye Solution Pvt. Ltd.

- Founded by Mr. Anshuman Bansal (IIT Kharagpur alumnus) under the mentorship of Dr. A.S. Rathore (Chemical Engineering, IITD), Simplyfeye is in operation since June 2010. This venture has developed powerful Web 2.0 based enterprise software for capturing, sharing and analyzing information from biopharmaceutical processes (a KM Tool that empowers an industry unit to improve process development). The company exited the incubator in June, 2013.

Dr . A. Wali during the TiE Entrepreneurship Program at IITD

7. Events

(April 1, 2013 - March 31, 2014)

Convocation

(April 1, 2013 - March 31, 2014)

Distinguished Alumni Award

IIT Delhi lays great emphasis on interaction between its alumni and the Alma Mater and provides strong supports to the IIT Delhi Alumni Association (IITDAA). The Institute is proud of its alumni and their achievements. The success of the alumni is one of the most important yardsticks by which the Institute measures its achievements in academic/professional fields.

The Institute recognizes the outstanding contributions made by its alumni in various areas by conferring the Distinguished Alumni Award each year. This award is the highest honour conferred by the Institute on its alumni to recognize their achievements and outstanding contributions to academics, business, profession and / or public services. For the year under report, the prestigious award has been conferred upon the following at the 44th Convocation.

Dr. Rajpal S. Sirohi

Distinguished Alumni Award

(Post-M.Sc. Diploma in applied Optics, 1965 and Ph.D. Physics, 1970), Lokapriya Gopinath Bordoloi Chair Professor, Central University, Tezpur, Assam.

Prof. Sugata Mitra

Distinguished Alumni Award

(M.Sc. Physics, 1975 and Ph.D. Physics, 1978), Professor of Educational Technology, Newcastle University, UK.

Dr. T.S. Ramakrishnan

Distinguished Alumni Award

(B.Tech., Chemical Engg., 1980), Scientific Advisor/Research Director, Schlumberger-Doll Research, USA.

Dr. Varun Grover

Distinguished Alumni Award

B.Tech., Elect. Engg., 1982), William S Lee (Duke Energy) Distinguished Professor of Information Systems, Clemson University, USA.

Prof. Sanjay Puri

Distinguished Alumni Award

(MS, Physics, 1982), Professor, School of Physical Sciences, JNU, New Delhi.

Medals and Awards winners at the 44th Convocation

Following is the list of award winning students at the convocation.

President's Gold Medal

Deepak Vasisht

Director's Gold Medal

Sarneet Kaur Broca

Sukriti

Arushi Arora

Sandeep Kumar Bindal

Nishal Pradeepkumar Shah

Anshul Malhotra

Akarsh Shrivastava

Ananth Govind Rajan

Sarthak Kalani

Jigyasa Gupta

Anirudh Jain

Aarsh Vir Gupta

R. Srivatsan

Sukhmanjot Kaur

Dr. Amrik Singh Medal & Prize
Soumyajit Sarkar
Lt. Arpan Banerjee Award
Vinit Vijay Deshpande
Dogra Medal
Raghav Agnihotri
Dogra Educational Endowment Medal
Maumita Bhattacharjee
Prof. O.P. Gupta Medal
Faisal Naeem
Prof. Pushpa Bajaj Gold Medal
P. Archana
Perfect Ten Gold Medal
Yashna Sharma, Faraz Zaidi, Deepak Ramasubramanian & Nikhil Kumar Singh
Parampujya Baba Sant Nagpalji Gold Medal
Harish Iyer
Prof. M.M. Chawla Gold Medal
Kr Gaurav
Prof. M.C. Puri Memorial Medal
Sanjay Mishra
Dr. Neeraj Srivastava Prize
Shreya Banerjee
Mrs. Santokh Gill Award
Sanjay Mishra
Prof. A.K. Sinha Cash Prize
Deepak Ramasubramanian
NBCC Prize of Excellence
Faraz Zaidi

Jagat Ram Chopra Award
Anirban Dutta
Suresh Chandra Memorial Awards
Sandeep Kumar Bindal
Padmashri Man Mohan Suri Project Award
Girish Chandra Verma
Chand Rani-Banarsi Dass Duggal Memorial Award
Bharat Bhushan
K.S. Prakasa Rao Memorial Award
Deepak Ramasubramanian
IEEE-PEDES 96 Award
Sagar Goel
Shrimati and Shri H.R. Mittal Cash Award
Mahaveer Singh
Buti Foundation Bodh Raj Gold Medal (for best women student)
Yashna Sharma
Amit Garg Memorial Research Award
Bhambure Rahul Sharad Shaila
Shrimati Vijay-Usha Sodha Research Award
Siva Reddy V.
Dr. Shivraj Nandan Sinha Medal
Punit Kumar
Dogra Gold Medal
Shalinee Daga
M.M. Chawla Gold Medal
Anshul Malhotra
Rajiv Bambawale Cash Prize
Adarsh Prasad

Harsha Vardhan Dwarkadas Motiwala Memorial Prize
Sukhmanjot Kaur
K. Vasudevan Award
Sukhmanjot Kaur
Alok Saxena Memorial Award
Aamir Zeb
Suresh Chandra Memorial Awards for best software project
Salik Jamal Warsi & Vakul Jindal (Jointly)
Jagatpreet Singh Nir
Padmashri Manmohan Suri Project Awards
Anshul Kapoor, Nikhil Gupta & Harshit Jain (Jointly)
ICIM Stay Ahead Award
Harshit Jain
Jayant Sinha Award
Aamir Zeb
Punita Kumar - Sinha Award for All Round Excellence
Swati Ganeti
Bimla Jain Medal
Jigyasa Gupta
Rahul Giri Memorial Medal
Ankit Agarwal
Dr. Kewal Krishan Baveja Gold Medal
Ananth Govind Rajan
Ujjal Jeewan Charitable Trust Award
Sukriti
Laxmi Bai-Lal Chand Khurana Memorial Award
Anshul Malhotra

Mudit Sharma Memorial Gold Medal
R. Srivatsan
Rajiv Bambawale Cash Award
Deepak Vasisht
BOSS Award
Choppakatla Satya Saran Pavan
Akarsh Shrivastava
Dhruv Jain, Himanshu Meenia & Ashwini Choudhary (Jointly)
Amogh Bihani & Sarthak Kalani (Jointly)
Bhavika Goyal & Anurag Singh (Jointly)
Praharsh Chandra & Harshit Jain (Jointly)
Babita Yadav
Malvika Jain & Parul (Jointly)
Alumni Association IIT Delhi Prize
Eshaan Gupta
Prem Sheel Bhatnagar Memorial Award
Shilpa G.
Suman - Upma Memorial Gold Medal
Krithika Ramchander
Nayyar Perwez Shahabuddin Medal
Harshit Jain
Abhinav Dhupar Memorial Award
Prateek Bansal
Mrs. Chander Kanta Nanda Excellence Award
Shilpa Khatana & Piyush Ahuja
S.L. Duggal Excellence Cash Award
Harshit Jain
Rajindra Kumari Malhotra Memorial Prize
Ananth Govind Rajan & Aamir Zeb (Jointly)

Conferences/ Seminars/ Workshops/ Lectures

(April 1, 2013 - March 31, 2014)

The departments and centres of the Institute organized many conferences, seminars and workshops and some major of them are highlighted here under:

Departments/Cetres/Schools	Title of the Conference/Seminar/ Workshop/ Lecture
Chemical	Symposium on Rheology of Complex Fluids-2013 by Dr. S. K. Pattanayek (19th – 20th December)
	A Round Table Discussion Meeting on "Challenges in Applications of CFD in Oil and Gas, Energy and Process Industries" organized by IIT Delhi and Ansys India by Dr. V. V. Buwa (23rd October 2013)
	BIRAC-CDSA Regulatory Meet: Demystifying Indian Regulations for Product Approvals, Five Day Course held at IIT Delhi, New Delhi, India, July 2013 by Prof. A.S. Rathore
	SERB School on "Rheology of Complex Fluids: Advanced computational Methods" and Symposium of "Rheology of complex Fluids 2013" organized by Dr. S. K. Pattanayek & Dr. V.V. Buwa, (16-20 December 2013)
	Fundamentals of Petrophysics by Dr. Jyoti Phirani (4th Nov. 2013)
	Production Analysis of shale resources by Dr. Jyoti Phirani (27th Nov. 2013)
	Reaction Mechanisms and the Design of Heterogeneous Catalysts for Sustainable Energy by Dr. M. A. Haider (28th March 2013)
	Biomimetic Adaptations of Multi-objective Evolutionary Algorihms for the Optimization of Chemical Processes by Dr. M. C. Ramteke (16th July 2013)
	Modeling of Concentration Fronts and Pt Dispersion Effects in A Lean NOx Trap by Dr. Divesh Bhatia (7th Nov. 2013)
	RERB School on Rheology of Complex Fluids: Advanced Computational Methods (16th - 18th December 2013)
	Rheomicroscopy workshop by Anton Paar (18th March 2014)
Chemistry	New Horizons in Chemical Sciences (In-House Symposium), Indian Institute of Technology Delhi (November 16, 2013)
	International Satellite Symposium on Emerging Trends in Glycoscience and Glycotechnology (International Symposium), Indian Institute of Technology Delhi (January 8-10, 2014)
Civil Engineering	Co-coordination of a 3-day National Seminar on 'Thermal and Other Techniques for Waste Management' at NIT Calicut under the MoU between IIT Delhi and NIT Calicut
	Organization of a 5-day International School on Microbial Risk Assessment in collaboration with Drexel University (USA) and Michigan State University (USA) at Drexel University, Philadelphia USA (IIT Delhi Team: Prof. Mukesh Khare, Prof. Arvind K. Nema, Prof. Atul K Mittal, Prof. James Gomes, Dr. Arun Kumar; IIPH Hyderabad: Prof. GVS Murthy; NEERI: Prof. Rakesh Kumar and Prof. JS Pandey and Dr. Radha Goyal) as a part of the ongoing Singh-Obama Initiative funded project "Resource building for ecosystem and human health risk assessment with special references to microbial contamination " (2013-15)
	Workshop on Offshore Geotechnical Engineering on by Prof. J.T. Shahu (January 31, 2014)
	'THE RED MUD DISASTER IN HUNGARY AND THE LESSONS LEARNT' expert lecture under CES by Professor Ákos Rédey, Director, Institute of Environmental Engineering, University of Pannonia, Veszprém, Hungary
Computer Science and Engineering	"Breakthroughs in Theoretical Computer Science" at IIT Guwahati, by Prof. Amit Kumar (jointly with Dr. Nisheeth Vishnoi at Microsft Research, Bangalore) (Dec 10-11, 2013)
	"Recent Advances in Theoretical Computer Science" by Prof. M. Balakrishnan at IIT Delhi (16th Dec, 2013)
	"ACM India Annual Event" by Prof. M. Balakrishnan at IIT Delhi during (Feb 14-16, 2014)
	"Big Data and Smarter Cities" by Dr. Amitabha Bagchi (October, 2013)
	School on Advanced Algorithms by Prof. Naveen Garg (jointly with Atul Gupta at IIIT Jabalpur) (June 11-14, 2013)
	"Winter School on Data Analytics" at SCSIT, DAVV, Indore. The workshop was jointly organized by The Indo-German Max Planck Center for Computer Science (IMPECS) and the School of Computer Science & IT (SCSIT), DAVV Indore by Dr. Maya Ramanath (Nov. 15-18, 2013)
	Delivered invited lecture on "Match making" at Home Bhabha Center for Science Education, Mumbai by Prof. Naveen Garg (22nd Dec, 2013)
	Delivered keynote lecture at the conference VDAT, 2014 by Prof. M. Balakrishnan (28th July, 2013)
	Delivered keynote lecture at AD Patel Institute of Technology by Prof. M. Balakrishnan (20th March, 2014)
	Delivered keynote lecture at Research Promotion Workshop on "Introduction to Graph and Geometric Algorithms" at Thiruvananthapuram by Dr. Amitabha Bagchi (23-25 January 2014)
	Delivered keynote lecture at Dayal bagh Educational Institute, Agra by Prof. M. Balakrishnan (1st Jan, 2014)
	Delivered keynote lecture at Geometry Workshop at IIT Roorkee by Prof. Subodh Kumar
	Delivered invited lecture at IIIT Delhi by Prof. M. Balakrishnan (17th Oct, 2013)
	Delivered keynote lecture at CEERI, Pilani by Prof. M. Balakrishnan (23rd Sept, 2013)
	Delivered invited lecture at Research Scholar Meet, Dept. of CSE, IIT Bombay by Prof. Amit Kumar (Nov 8-9, 2013)
	Delivered keynote lecture at Inclusive Innovation Exhibition, Pune by Prof. M. Balakrishnan (December 2013)
	Delivered institute lecture on "Introduction to Cloud Computing and the Development of Baadal" by Dr. Sorav Bansal

Conferences / Workshops / Seminar

Electrical Engineering	Programming of TMS320F28335 Floating-point DSP (9.05.2013)
	Computational Intelligence Theories, Applications and Future Directions (13-14 July, 2013)
	Technical lecture by Akhil Kumar Gupta (26.04.2013)
	Lecture on "Smart Grid" by Mr. Vikram Gandotra (27.04.2013)
	Lecture on "New Direction in Energy & Power Research" by Prof. Saifur Rahman (19.08.2013)
	Lecture on "Voltage stability Analysis and improvement by optimum reactive power control" by Prof. D. Thukaram (26.09.2013)
	Lecture on "PMU Measurement and Systems" by Mr. Amol Kolwalkar (8.10.13)
	Lecture on "Applications on Synchrophasor measurements in Power Systems" by Dr. Amol Kolwalkar (8.10.13)
	Lecture on "Smart Initiative in Renewables" by Mr. Ravi Segal (11.10.2013)
	Lecture on "Automatic Voltage Regulator" by Mr. Arvind Gupta (16.10.2013)
	Lecture on "Understanding Performance Chart for an Alternator connected to a Grid Part –I" by Prof. J. Nanda (18.10.2013)
	Technical lecture on "Monitoring and Diagnostics of Electrical Machines" by Dr. Rupam mukherjee (7.11.13)
	Lecture on "Applied Electromagnetics in Electrical Machines and Transformers" by Mr. Ravindra Bhide (20.11.13)
	Lecture on "Role and Requirement of Protection in Power Systems" by Mr.A. Gupta (12.02.2014)
	Lecture on "Transformer Protection Schemes" by Mr. A. Gupta (24.02.2014)
	'Energy Saving and Power Quality Aspects' by Meenu Singhal (5.12.2013)
Management	Thirteenth Global Conference on Flexible Systems Management (December, 13-15, 2013)
	International Conference on Research in Marketing (ICRM 2013) - (December 21-22, 2013)
	Academic Leadership Program (March 10-15, 2014)
Mechanical	Biodesign Innovation Workshop (in collaboration with Stanford India Biodesign Programme) by Prof. PVM Rao (October 2013)
Physics	Heusler Alloys: Magnetic materials with multifunctional properties by Prof. A. K. Nigam (27/03/2014)
	X-ray Free-Electron Laser: A Revolution in Science by Dr. Gopal Dixit (10/02/2014)
	New Science for Solar Energy by Prof. Stephen C. Rand (22/01/2014)
	Chiral Symmetries and Angular Momentum by Dr. Mishkatul Bhattacharya. (15/01/2014)
	Molecularly-tailored nanomaterials and interfaces with novel properties by Prof. G. Ramanath (10/12/2013)
	The atomic Clocks - R and D Frequency Standard at NPL, India by Dr. Subhadeep De (12/11/2013)
	The Physics of Ventricular Arrhythmias: Insights from Computational Studies by Prof. Rahul Pandit (27/09/2013)
	Novel Electronic phases and phase transitions at oxide interface by Prof. R. C. Budhani (15/04/2013)
	Junction of Dirac materials by Prof. Krishnendu Sengupta (11/04/2013)
	Workshop on Recent Advance in Photonics, IITD (17-18/12/2013)
	Controllable Growth of Nanostructures by Prof. B R Mehta (18/03/2014)
	Relativity in the 21st Century by Prof. V Ravishankar (21/01/2014)
	Application-specific Specialty Optical Fibers: A Challenging, New Design Platform by Prof. Bishnu P. Pal (19/11/2013)
	Novel functional materials: from 'smartness' to 'spintronics by Prof. Ratnamala Chatterjee (29/10/2013)
	Electronics Rides on Spin by Prof. D. K. Pandya (15/10/2013)
	Singular Optics by Prof. P. Senthilkumaran (10/09/2013)
	Laser Driven Acceleration of Ions by Prof. V. K. Tripath (27/08/2013)
	Quantum Gravity: Is it necessary? Is it possible? By Prof. Ajit Kumar (09/04/2013)
Textile Technology	APA International Conference on Polymers: Vision and Innovations, Organizer: IIT Delhi and Asian Polymer Association, Coordinator: Prof. B Gupta, Joint Secretary: Dipayan Das, Place: India Habitat Center, New Delhi (February 19-21, 2014)
	5th World Conference on 3D Fabric and their Applications, Coordinator: Prof. B. K. Behera (December 16-17, 2013)
	One Day seminar on Mechanics of Textile structure, Coordinator: Prof. B K Behera (14th December 2013)
	2 -Day seminar on Innovative Textiles, Coordinator: Prof. B. K. Behera (April 15-16, 2013)
	Workshop on Comfort in protective clothing, Coordinators: Apurba Das, Abhijit Majumdar & R. Alagirusamy (17th August 2013)
	Round Table meet between industry captains and the departmental faculty (3 June 2013)
	The Chain Textile and Strategies of Developing and Manufecturing Clothings. , by. Prof. D. M. Francisca, University of Sao Paulo, Brazil (13.02.2014)
	Prof. Bohushav Neckar, Faculty of Textile Engineering, Technical University of Liberec, Czech Republic

Conferences / Workshops / Seminar

Applied Research in Electronics	IEEE Intl. Microwave and RF Conference, New Delhi: Prof. S. K. Koul, Conference Co-Chair, Prof. Ananjan Basu: Technical Program Committee Co-Chair (14-16 Dec. 2013)
	International Underwater Technology Workshop 2013 at NIOT Chennai: Prof. R. Bahl: Vice Chairman (Oct 2013)
	Workshop on the patch antennas (16th Oct. 2013)
	Power Efficient Multi-band/Multi-Standard Wireless Transmitter for Software Defined Radios by Dr. Karun Rawat, IIT Delhi (13th May, 2013)
	A Lecture on Load-Modulation in Doherty PAs for Wireless Transmitters, IIT Delhi and Mr. Gowrish B., cypress semiconductors, Bangalore by Dr. Karun Rawat (8th Nov, 2013)
	A Lecture on Electrically Short Antenna: Passive & Active Antenna for general applications, Synergy Microwave Corporation NJ, USA by Prof. Ulrich L. Rohde (12th Dec, 2013)
	A Lecture on Low Noise Signal Generation and Verification Techniques, Northrop Grumman USA by Dr. Michael Driscoll (12th Dec, 2013)
	A Lecture on Latest technology and technological challenges in oscillator design, Synergy Microwave Corporation NJ, USA by Dr. Ajay K. Poddar (12th Dec, 2013)
	A Lecture on Microwave Filter and Diplexers for wireless application, University of Waterloo, Canada by Dr. C. Kudsia (17th Dec, 2013)
	A lecture on Waveguide Filters for Satellite Communication, Technical University, Spain by Dr. Vicente Boria (17th Dec, 2013)
	A Lecture on Thz Radar for 3D IMaging, NASA, USA by Dr. G. Chattopadhyay (17th Dec, 2013)
	A Lecture on Chip less RFID Sensors: Revolution in Identification and Sensing in the New Millennium, Date: 24th Dec. 2013, Speaker: Prof. Nemai Chandra Karmakar, Monash University, Australia.
	A Talk on the Software Defined Radio, Founder, Pawlan Communications, USA by Dr. Jeffrey Pawlan (31st Jan. 2014)
	Monterey Bay Aquariam Research Institute, USA A Talk by Kanna Rajan (6th Nov. 2013)
Biomedical Engineering	Lecture on "Contributions to Orthopedic Biomechanics" by Dr. H.S. Ranu (21.05.2013)
	Expert Talk on "Adolescent Brain, Teenage Drinking and Cognition" by Prof. Ratna Sircar (18th January, 2014)
	Research Discussion on "Brain Products" by Dr. Nicola Soldati on 5th March, 2014
	Lecture on "The Role of Physical Activity and the Use of Adaptive Technology in the Treatment of Non-Communicable Diseases" by Dr. Jimmy Abbas (31st March, 2014)
	Lecture on "Closing the loop: Nerves, Machines and Interfaces" by Dr. Ranu Jung (31st March, 2014)
	Lecture on "Research on Appropriate Advanced Surgical Technology for Application in Practice" by Prof. Peter Brett, Professor of Bioengineering Systems, Brunel University
Energy Studies	"Economics and Financing of Renewable Energy Technologies" A HRD Programme was organised by Prof. T.C. Kandpal from (July 24 to 27, 2013)
	"Techno-Economics of Solar Power" A HRD Programme (Short Course) was organised by Prof. T.C. Kandpal from (Dec. 18-21, 2013)
	R&D Physicist Performance Materials Division, Advanced Technologies (PM-AC) Merck Chemicals Ltd., Southampton UK delivered a lecture High Efficiency Polymer Semiconductors for Organic Photovoltaics (OPV) by Dr. Priti Tiwana (Sept. 11, 2013 at 3:00 PM)
	Senior Researcher, Department of Advanced Material Science and Engineering, Sungkyunkwan University, South Korea delivered a lecture, ICP Dual Frequency Discharges: A potential tool for Large Area Plasma Processing by Dr. Anurag Mishra (25 February, 2014 at 15: 00 hrs)
Instrument Design & Development Centre	"IRPT based control of a 50 kW grid interfaced solar photovoltaic power generating system with power quality improvement," in Proc. 4th IEEE International Symposium on Power Electronics for Distributed Generation Systems (PEDG 2013) pp.1-8 by Bhim Singh, D.T. Shahani and Arun Kumar Verma (8-11 July 2013)
	"Sinusoidal Integrator based control of a grid interfaced solar photovoltaic power generating system," in Proc. International Conference on Power and Energy System (ICPS 2013) by Bhim Singh, D.T. Shahani and Arun Kumar Verma (27-30 October 2013)
	"Current Synchronous Detection based control of grid interfaced Solar Photovoltaic power generating system," in Proc. Annual IEEE India Conference pp.1-6 (INDICON 2013) by Arun Kumar verma, Bhim Singh and D.T. Shahani (13-15 Dec. 2013)
	"Power Quality Improvement in Grid Interface Solar Photo-Voltaic (SPV) Power Generating Systems," National Conference on Integrated Energy Systems and Environmental Protection New Delhi by Arun Kumar verma, Bhim Singh and D.T. Shahani (6-7 Feb. 2014)
	"Combined Operation of a VSC Based Grid Interfaced Solar Photovoltaic Power Generation System with Night Time Application," Accepted in PES Meeting, 2014 organized by Arun Kumar Verma, Bhim Singh and D.T Shahani, Ambrish Chandra, and Kamal Al-Haddad.
	"Recognition of Power Quality events using S-transform based ANN classifier and rule based decision tree," IEEE Industry Appl. Society Annual Meeting, pp.1-8 organized by R. Kumar, B. Singh, D. T. Shahani, A. Chandra, K. Al-Haddad (6-11 Oct. 2013)
	"Recognition of Power Quality Events UsingS-Transform Based ANN Classifier and Rule Based Decision Tree," Accepted for IAS annual meeting 2013 by Raj Kumar Garg, Bhim Singh and D.T Shahani
	"Neural Network Controlled Grid Interfaced Solar Photovoltaic Power Generation. Accepted in IET Power electronics by Bhim Singh, D.T Shahani and Arun Kumar Verma (July 2013)

Conferences / Workshops / Seminar

	"Study the Effect of Magnetic Field on Gaseous Flames using Digital Speckle Pattern Interferometry," Optics 14, International Conference on Light, Calicut, India by Manoj Kumar, Shilpi Agarwal, Varun Kumar, Gufran S. Khan and Chandra Shakher (March 18-21, 2014)
	"Temperature Measurement of Axisymmetric Flames under the Influence of Magnetic Field using Talbot Interferometry", Optics'14, International Conference on Light, held in NIT Calicut, India by Shilpi Agarwal, Manoj Kumar and Chandra Shakher (March 18-21, 2014)
	"Measurement of convective heat transfer coefficient along the surface of heated wire using digital holography", International conference on Optics and Optoelectronics 'ICOL 2014' (XXXVIII symposium of Optical Society of India), IRDE Dehradun, India by Varun Kumar, Manoj Kumar, and Chandra Shakher (March 05-08, 2014)
	"Measurement of Temperature and Temperature distribution in diffusion flame using Digital speckle Pattern Interferometry", 11th International conference 'Correlation Optics 2013', Chernivtsi, Ukraine by Manoj Kumar, Varun Kumar, and Chandra Shakher (September 18-21, 2013)
	"Measurement of Temperature Profile around Heated Wire using Digital Holography", 7th International workshop on Advanced Optical Imaging and Metrology, Fringe 2013, Stuttgart, Germany by Varun Kumar, Manoj Kumar, Shobhna Sharma and Chandra Shakher (September 08-11, 2013)
	"Temperature measurement of diffusion and pre-mixed flames under the under the influence of magnetic field using Digital Holographic Interferometry", 7th International workshop on Advanced Optical Imaging and Metrology, Fringe 2013, Stuttgart, Germany by Chandra Shakher, Shobhna Sharma, Manoj Kumar Varun Kumar, and Shilpi Agarwal (September 08-11, 2013.)
	"Measurement of Temperature and Temperature Profile of Axi-symmetric Butane Torch Burner Flame using Digital speckle Pattern Interferometry", 7th International workshop on Advanced Optical Imaging and Metrology, Fringe 2013, Stuttgart, Germany by Manoj Kumar, Varun Kumar, Gufran Sayeed Khan, and Chandra Shakher (September 08-11, 2013)
	Delivered a lecture on "Interferometric techniques for measurement of temperature and temperature profile of gaseous flames", at Niigata University, Japan (07 June, 2013)
	Delivered a lecture on "Digital holographic interferometric techniques for measurement of temperature and temperature profile of gaseous flames", at University of Kobe, Japan (13 June, 2013)
	Delivered a lecture on "Solar holography: A relook on the use of volume phase transmission holographic lenses for photovoltaic concentrator applications" at University of Kobe, Japan (13 June, 2013)
	Delivered a lecture on "Interferometric techniques for measurement of temperature and temperature profile of gaseous flames", at Kyoto Institute of Technology, Japan (14 June, 2013)
	Delivered a lecture on "Solar holography: A relook on the use of volume phase transmission holographic lenses for photovoltaic concentrator applications" at Kyoto Institute of Technology, Japan (14 June, 2013)
	Centre of Applied Research and Education (CORE) Seminar at Utsunomiya University Japan (26 June, 2013)
	Interferometric techniques for measurement of temperature and temperature profile of gaseous flames.
	Solar holography: A relook on the use of volume phase transmission holographic lenses for photovoltaic concentrator applications
	Delivered invited talk on, "Measurement of refractive index and refractive index gradient using digital holography" at International Conference on Optics and Optoelectronic 'ICOL- 2014' (XXXVIII symposium of Optical Society of India) on 07-03-2014 held at Instrument Research and Development Establishment (IRDE) Dehradun, India (March 5-8, 2014)
Polymer Sciences	Training course on Science and Technology of PVC for SRIRAM Polytech, Gurgaon (May, 2013- Jan 2014)(4 Modules)
	SABIC- Innovative Plastics India Pvt. Ltd by Mr. Sanjiv Vasudeva
Rural Development and Technology	The National Sanitation Roundtable on Achieving Nirmal Bharat as part of the campaign 'Take Poo to the Loo' was held at Indian Institute of Technology Delhi (6th of March 2014)
	A Workshop on 'Promotion of Biogas Upgrading Bottling in India and European Union' was held at IIT Delhi (22-24 August, 2013) A Workshop on 'Mushroom Technology – Present Scenario and Future Prospects in India' (16-18 December 2013)
	Lecture on 'Karigar Vidya - Parasparata, Samriddhi Evam Saundarya Drishti ka Samay Siddha Srot' by Shri Ravindra Sharma (23 September 2013)
	Lecture delivered by Prof. G. V. Soumitri, Deputy Dean, Industrial and Interior Design at RMIT University on the topic of 'Social and Sustainability Issues in Design' (13 September 2013)
Amar Nath and Shashi Khosla School	India France Workshop in ICST "BIG DATA & CYBER-PHYSICAL SYSTEMS" (April 4-5, 2013)
	Resonance India Program 2013 (June 24-July 6, 2013)
	Formal Methods Update Meeting (July 27-28, 2013)
	Indo-Dutch Workshop on Pervasive Communication and Computing Collaboration (March 19-20, 2014)
	Resonance India Program 2013, Sponsors: School of IT, MIT, Harvard University, AIIMS, (June 24-July 6, 2013)
	Prof. Kaleem Siddiqi, Dept of Comp Sc, McGill Univ. Montreal CA (August 2013)
	Prof. Ian Munro, University of Waterloo, Canada (5-6 Feb 2014)
Kusum School of Biological Sciences	"Computational Biology in Disease & Disorder" in BioWorld 2013 (9-11 December 2013)
	Prof. C.M. Dobson, University of Cambridge, 2013
	Prof. Barry Buckland, Faculty of Engineering Science University College London, also CEO of Biologic B (14th Nov 2013)
	Dr. Animesh Dhar, Kansas University Medical Center, Kansas City, USA (31st January 2014)

Interaction with Alumni

(April 1, 2013 - March 31, 2014)

IITDAA sponsored three UG&PG awards for innovations in the I2Tech 2013- IIT Delhi's 'Technology Open House', where newly developed products and technologies are displayed. It was held at IIT Delhi on 20th April, 2013.

'Leadership Conclave' was held on 20 April, 2013 at WelcomHotel Sheratorn, Saket. This event was dedicated to the memory of Prof. P.V. Indresan. Hon'ble APJ Abdul Kalam was invited for the event and he graced the event by delivering a lecture.

AGM 2013 & Annual Get-together held on 27 April, 2013 at IIT Delhi. There were more than 800 people present at the event. At this event, IITDAA presented awards for Outstanding Contribution to National Development, 2012-2013 to : Mr. Ajay Kumar (B.Tech., Electrical , 1975) and Mr. Shashank Mani Tripathi (B.Tech., Mechanical, 1986).

UNIITE - Innovation & Technology Meet held on 15 November 2013.

Workshop on Entrepreneurship by Rodinhoods held on 09 November 2013.

IITDAA & Textile Engineering Society organized a Play "God of Carnage" which was held on 15th February 2014 at Seminar Hall, IIT Delhi.

REUNIONS

The Silver Jubilee Reunion Batch of 1989 held on 27-28, December 2013. Over a hundred alumni from the batch of 1989 attended the event to make it truly memorable.

The first "IIT Delhi Alumni Day" was held on 29th December 2013. The theme was 'ENVISIONING THE FUTURE TOGETHER'. It was the first ever Alumni Day celebration, inviting participation of Alumni of all batches from 1961 to 2013, representing over fifty years of glorious history. Approximately 500 alumni attended the event which included a number of activities e.g. panel discussions, felicitation function, cultural program followed by dinner.

DISTINGUISHED SPEAKERS

- The Office of Dean, AAIP organized Seminars/Lectures which were delivered by distinguished international speakers including : Institute lecture on "Innovation and Start-Up Nation: Harnessing Israeli Technology for Business Success" by Mr. Naftali Bennett, Minister of Economy of the State of Israel on October 7, 2013.

Distinguished Visitors

(April 1, 2013 - March 31, 2014)

Many delegations from the Industry, Academia and the Government form several countries visited the Institute to explore the possibilities of mutual interaction. Some of these are highlighted below:

- A 11 member delegation led by YBhg. Datuk Haji Omar Bin Abd. Rahman, Deputy Secretary General (Management), Min. of Higher Education, Malaysia, visited the Institute on 4 Apr, 2013.
- A 3 member delegation led by Dr. Hesham Ali, Dean of the College of IS&T and Prof., Comp. Sc./Bioinformatics from University of Nebraska, USA, visited the Institute on May 16, 2013.
- A 11 member delegation led by Ms. Alyssa Ayres, Deputy Assistant Secretary, U.S. Department of State from Information and Communication Technology, visited the Institute on May 21, 2013.
- A 5 member delegation led by Dr. Mark S. Kamlet, Provost & Executive Vice President, iCarnegie-Carnegie Mellon University. USA, visited the Institute on 21 August, 2013.
- A 4 member delegation led by Dr. Hassan Said Kashoob, Vice Chancellor, Dhofar University, Oman, visited the Institute on 26 August 2013.
- A 4 member delegation led by Mr. Hiroyuki Abe, Counselor to the president, Director General, Centre for Intellectual Property Strategies, Japan Science and Technology, visited the Institute on 19 September 2013.
- Prof. Ajay K. Garg, Tshwane University of Technology, Business School, Pretoria, South Africa, visited the Institute on 26 September 2013.
- A 12 member delegation led by Mr. Gerard Poirier, Research, Design and Engg. Directorate, Deputy Vice President, R&D Partnership and cooperation, Thematic Division of Dassault Systems, France, visited the Institute on Oct 22, 2013.
- A 13 member delegation led by H.E. Amb. Mohd. Awadh al Hassan, Ministry of foreign Affairs, Science & Technology, Oman, visited the Institute on Oct 22, 2013.
- A 6 member delegation led by Prof. Dr. rer. nat. Gerhard Schneider Aalen University, Rector, German Academic Exchange Service (DAAD), Germany, visited the Institute on Oct 25, 2013.
- Dr. Bashir Radd, Vice President in charge of Scientific Afairs, Libya Open University, Libya, visited the Institute on Nov 13, 2013.
- A 3 member delegation led by Dr. Kumble R. Subbaswamy, Chancellor, University of Massachusetts, USA, visited the Institute on Jan 3, 2014.
- A 3 member delegation led by Prof. Shinji Kaneko, Hiroshima University, Japan, visited the Institute on Jan 7, 2014.
- A 10 member delegation led by Dr. Sung-Mo "Steve" Kang from Korea Advance Institute of Science and Technology (KAIST), visited the Institute on Jan 16, 2014.
- A 3 member delegation led by Dr. Heung Nam Kim, President of ETRI Global Cooperation Team, Korea, visited the Institute on Jan 16, 2014.
- A 6 member delegation led by Mr. Sadayuki Tsuchiya, Deputy Minister of Education, culture, Sport, Science & Technology, Japan, visited the Institute on Jan 27, 2014.
- A 3 member delegation led by Mr. Yerlan Sydykov, Rector, Eurasian National University, Astana, Kazakhstan, visited the Institute on Jan 27, 2014.
- A 3 member delegation led by Prof. Liqiu Meng, Vice President, Technical University of Munich, Germany, visited the Institute on Jan 29, 2014.
- A 3 member delegation led by Dr. Remi Quirion, Chief Scientist, Quebec, visited the Institute on Feb 7, 2014.
- A 20 member delegation led by Prof. Joseph J. Helble, Thayer School of Engineering, Darthmouth College, Hanover, USA, visited the Institute on Feb 10, 2014.
- Sir Timothy O'Shea, Vice Chancellor, University of Edinburgh, Scotland, visited the Institute on Feb 24, 2014.
- Mr. Mark Lowcock, Permanenet Secretary of UK Government's Deptt. for International Development (DFID), visited the Institute on Mar 20, 2014.
- Prof. Joseph Klafter, President, Tel Aviv University, Isreal, visited the Institute on mar 24, 2014.

Dr. Heung Nam Kim, President of ETRI Global Cooperation Team, Korea, receiving a souvenir from DD (S&P), IIT Delhi. Dr. Heaung visited the institute on January 16, 2014.

Mr. Yerlan Sydykov, Rector, Eurasian National University, Astana, Kazakhstan, in a meeting with Director, IITD. Mr. Yerlan Sydykov visited the Institute on January 27, 2014.

Mr. Sadayuki Tsuchiya, Deputy Minister of Education, culture, Sports, Science & Technology, Japan, receiving a souvenir from Director, IITD. Mr. Sadayuki visited the Institute on January 27, 2014.

Mr. Mark Lowcock, Permanent Secretary of UK Government's Deptt. for International Development (DFID) in a meeting with Director, IITD. Mr. Mark Lowcock visited the Institute on March 20, 2014.

8. Faculty

(April 1, 2013 - March 31, 2014)

Faculty Awards / Recognitions

(April 1, 2013 - March 31, 2014)

It is a cliché to say that the quality of an academic institution largely depends on its faculty. Our faculty is one of the finest in the country and is recognized internationally for their quality of research, teaching and curriculum development. They also contribute greatly for the development of the nation by being associated with a large number of decision making bodies, providing crucial guidance and advice on policy matters and technical issues. Many of our faculty members serve on the editorial Boards of reputed journals, peer-review papers for publications, serve on committees for recruitment of professionals, and are on the Boards of many institutions and organizations. 37 new faculty members have joined the Institute this year, which has enhanced our competence in several emerging areas, while bringing new energy into our academic endeavors. The people joining us as faculty members, are amongst the finest available globally, and sought after, by all the reputed graduate schools of the developed world.

Searching and recruitment of bright faculty is one of our most important missions, since therein lies the future of the Institute. Our Board of Governors is seized of this issue, and has played a very positive and constructive role in approving policies, which empower the faculty to deliver their best in both teaching and research. On our part, we are trying to reach out to the potential faculty members through a variety of means, including round-the-year search and recruitment and on-line submission and processing of applications.

During the period under report, international bibliographic databases have indexed 2484 research articles published by faculty members and researchers of the institute in international journals including 1696 articles indexed in Scopus, an international indexing service in Science & Technology and Social Sciences. The faculty members have also presented a similar number of papers in national and international conferences. Besides, they have also published many books and conducted several continuing education programmes.

On the initiative of the Director, a meeting with all the faculty members of the Institute is held on a regular basis once in every semester to share the vision and initiatives taken and also to have an opportunity to receive feedback and expectation from faculty members. With the approval of Board, the various faculty designations, status, eligibility, limit, duration etc. in respect of faculty other than regular cadre has been implemented. A calendar in connection with faculty affairs for the academic year 2013-2014 has been devised and circulated to all faculty members. The Institute has undertaken recruitment under special drive for SC/ST/OBC/PH.

Faculty Awards/Recognitions

Our distinguished faculty colleagues continue to make a difference to the world of Science, Engineering, Humanities and Management, and continue to earn recognition and awards, which bring glory to the Institute. Many of them have been bestowed with honours/awards and elected as Fellows of several professional national/international bodies during the year 2013-2014. Some of these recognitions are highlighted below:

- Er. B.N. Chatterjee Mineral Engineering Science (MESA) Awarded for 2013 National Award (Dr. Sreedevi U.)
- Prof. K. D. P. Nigam, Senior Humboldt Research Award (Humboldt Research Award), Germany, 2013
- Prof. B. P. Mani, Life time achievement award for contribution to "Powder and Bulk Solids Handling", Ahemdabad, 2013
- Prof. A. S. Rathore, 2013 Appointed Chairman, Committee for Advising the DCGI on Regulation of Biotech Products (r-DNA product), Ministry of Health and Family Welfare, Government of India
- The Best Chemistry Teacher Award by Tata Chemicals, 2013 (AJE)
- Excellence in Teaching Award by IIT Delhi, 2013 (AJE, NDK, NJ)
- Fellow of Biotech Research Society of India, 2013 (SKK)
- CSIR-Burhani Foundation Award, MN Desai National Award, Lockheed Martin Gold Medal (HMC)
- Dr. Tanusree Chakraborty, DAAD Award for mentor visit program to Leibniz Universität Hannover, Germany, awarded in December, 2013
- Dr. Vasant Matsagar, DAAD Mentor Visit Program to Rheinisch-Westfälische Technische Hochschule Aachen (RWTH Aachen University), Universität der Bundeswehr München (UniBW); Technische Universität in München (TUM), Germany awarded in 2013.

Faculty Awards / Recognitions

- Dr. Tanusree Chakraborty, DAE Young Scientist Award by the Board of Research in Nuclear Sciences (BRNS) at Bhabha Atomic Research Centre (BARC), Department of Atomic Energy (DAE), Government of India, awarded in 2013
- Dr. Vasant Matsagar, Erasmus Mundus Award under the Action 2 project India4EU II programme of the European Commission to conduct research in Civil Engineering at Ecole Centrale de Nantes (ECN), France, awarded in 2013
- Dr. Sorav Bansal received IBM Faculty Award
- Dr. Amitabha Bagchi received Yahoo! Faculty Research Engagement Award
- Dr. Maya Ramanath received Yahoo! Faculty Research Engagement Award
- Professor Naveen Garg was elected as a fellow of the Indian Academy of Science
- Dr. Aaditeshwar Seth received "Amazing Indians" award from Times Now TV Network.
- Dr. Smruti Sarangi received "Teaching Excellence Award".
- Prof. Bhim Singh, Khosla National Award – 2013, Fellow TWAS, Fellow INSA
- Prof. R. K. Mallik, Fellow TWAS
- Dr. Shveta Singh, Prof. P. K. Jain and Prof. Surendra Singh Yadav, "Literati Award for outstanding excellence in research" by Emerald Publishing for the paper titled "Capital Budgeting Decisions Evidence from India.
- Dr. B. K. Behera, Fellow of Textile Association India-2013
- Prof. S.K. Koul, IEEE MTT-S Distinguished Educator Award
- Prof. Alok R. Ray, Gandhian Technology Innovation Award 2013
- Prof. L.M. Das was received HAIT.N. Veziroglu award by Hydrogen Association of India for being an "avid researcher for distinctive contribution in the area of Hydrogen energy" in Goa held on Dec. 1-3, 2013.The citation described him as "a visionary with exceptional acumen".
- Prof. S. N. Maiti, Biodegradable Polymer Blends and composites, Invited Lecture, APM Conference Bhubaneswar Date: 15.02.2014
- Prof. Satyawati Sharma has been appointed as;
    1. Jury Member, FICCI, India
    2. TAC Member, DSIR, DST
    3. PAC Member, DSIR, DST
    4. M.Tech Review Committee Member, CCS HAU, Hissar.
- Prof. V. K. Vijay was awarded '7th ENERTIA Awards' for 'Biogas Upgradation, Bottling for Vehicular Application' in 2013
- Dr. V.M. Chariar is the PI of the prestigious PEER Science project awarded by National Academy of Sciences & USAID in 2013
- Dr. Hariprasad P. was awarded a DST-SERB-Start up Research Grant for Young Scientists.
- Prof. B. Jayaram, Supercomputing Facility for Computational Biology declared as a National Centre of Excellence by the Dept. of Biotechnology, Govt. of India
- Prof. S. E. Hasnain, Order of Merit of the Federal Republic of Germany - Germany's highest civilian award in March 2014
- Dr. Manidipa Banerjee, Ramalingaswami Fellowship, from Department of Biotechnology, Govt of India (2010-2015)
- Dr. Ashok K Patel, Ramalingaswami fellowship, from Department of Biotechnology, Govt of India (2014-2019).
- Prof. C.S.Dey,
    1. Editorial Board Member, Scientific Reports, Nature Publishing Group, UK
    2. Head, Central Research Facility (CRF)

Faculty in Position

(April 1, 2013 - March 31, 2014)

Department of Applied Mechanics

Professor and Head

S. Ahmed, Ph.D.

Professors

Anupam Dewan, Ph.D.

Puneet Mahajan, Ph.D.

Rajesh Prasad, Ph.D.

Sanjeev Sanghi, Ph.D.

Arvind Agarwal, Ph.D.

S.N. Singh, Ph.D.

S.V. Veeravalli, Ph.D.

Santosh Kapuria, Ph.D.

Associate Professors

Badri Prasad Patel, Ph. D.

Maloy K. Singha, Ph.D.

Assistant Professors

Ajeet Kumar, Ph. D.

M.R. Cholemari, Ph.D.

Jayant Jain, Ph.D.

S. Pradyumna, Ph.D.

Anamika Prasad, Ph.D.

Balaji Srinivasan, Ph.D.

Sawan Suman, Ph.D.

Vikrant Tiwari, Ph.D.

Sitikantha Roy, Ph.D.

Adjunct Faculty (Naval Construction Wing)

Cdr. R. Vijaya Kumar

Lt. Cdr. Amit Ray

Capt. V.K. Satyam (Officer-in-charge)

Dharam Singh

LT. Cdr. S.K. Rao

Emeritus Fellow

D.K. Sehgal

R.K. Pandey, Ph.D.

P.K. Sen, Ph.D.

Department of Biochemical Engineering & Biotechnology

Professor and Head

T.R. Srikrishnan, Ph.D.

Professors

G.P. Agarwal, Ph.D.

V.S. Bisaria, Ph.D.

P.K. Roychoudhury, Ph.D.

Prashant Mishra, Ph.D.

Sunil Nath, Ph.D.

Saroj Mishra (Ms), Ph.D.

A.K. Srivastava, Ph.D.

Associate Professor

Atul Narang, Ph.D.

Assistant Professors

Ravi Krishnan Elangovan, Ph.D.

Ritu Kulshreshtha, Ph.D.

Preeti Srivastava, Ph.D.

D. Sundar, Ph.D.

Shilpi Sharma, Ph.D.

Shaikh Ziauddin Ahammad

Emeritus Fellow

Subhash Chand, Ph.D.

M.N. Gupta, Ph.D.

Department of Chemical Engineering

Professor and Head

S. Basu, Ph.D.

Professors

A.N. Bhaskarwar

S.K.Gupta, Ph.D.

Rajesh Khanna, Ph.D.

Ratan Mohan, Ph.D.

K.K. Pant, Ph.D.

Anurag Singh Rathore, Ph.D.

Shantanu Roy, Ph.D.

Anil K. Saroha, Ph.D.

Associate Professors

Vivek V. Buwa, Ph.D.

Shaik Abdul Munawar, Ph.D.

Sudip K. Pattanayek, Ph.D.

Anupam Shukla, Ph.D.

Sreedevi U., Ph.D.

Sanat Mohanty, Ph.D.

Assistant Professors

Jayati Sarkar, Ph.D.

Shalini Gupta, Ph.D.

Gaurav Goel, Ph.D.

Paresh P. Chokshi, Ph.D.

Jyoti Phirani

MA Haider

MKC Ramteke

Divesh Bhatia

Visiting Faculty

Mausam

Emritus Fellow

A.K. Gupta

KDP Nigam, Ph.D.

B. Pitchumani, Ph.D.

Department of Chemistry

Professor and Head

A. Ramanan, Ph.D.

Professors

A.K. Singh, Ph.D.

D.K. Bandyopadhyay, Ph.D.

C. Chakravarty (Ms), Ph.D.

H.M. Chawla, Ph.D.

Anil Jacob Elias, Ph.D.

N.D. Kurur, Ph.D.

S.K. Khare

B. Jayaram, Ph.D.

P.S. Pandey, Ph.D.

Siddharth Pandey, Ph.D.

Nalin Pant, Ph.D.

N.G. Ramesh, Ph.D.

A.K. Ganguli, Ph.D.

Ravi Shankar, Ph.D.

Jai Deo Singh, Ph.D.

Associate Professors

Pramit K. Chowdhury, Ph.D.

Shashank Deep, Ph.D.

V. Haridas, Ph.D.

S. Nagendran, Ph.D.

Sameer Sapra, Ph.D.

Assistant Professors

Nidhi Jain, Ph.D

Ravi P. Singh

Hemant Kumar Kashyap

P.P. Ingole

Department of Civil Engineering

Professor and Head

A.K. Jain, Ph.D.

Professors

B.J. Alappat, Ph.D.

B. Bhattacharjee, Ph.D.

Bhagu Ram Chahar, Ph.D.

Manoj Datta, Ph.D.

N.K. Garg, Ph.D.

Ashok Gupta, Ph.D.

V.R. Guntari, Ph.D.

K.C. Iyer, Ph.D.

A.K. Keshari, Ph.D.

Mukesh Khare, Ph.D.

Shashi Mathur, Ph.D.

A.K. Gosain, Ph.D.

Alok Madan, Ph.D.

A.K. Mittal, Ph.D.

A.K. Nema, Ph.D.

K.S. Rao, Ph.D.

K.G. Sharma, Ph.D.

Geetam Tewari, Ph.D.

J.T. Shahu, Ph.D.

Associate Professors

R. Ayothiraman, Ph.D.

Suresh Bhalla, Ph.D.

G.S. Benipal, Ph.D.

R.R. Kalaga, Ph.D.

S.K. Deb, Ph.D.

Kumar Neeraj Jha, Ph.D.

Rakesh Khosa, Ph.D.

Deo Raj Kaushal, Ph.D.

Vasant Matsagar, Ph.D.

Assistant Professors

Supratic Gupta, Ph.D.

Gazala Habib, Ph.D.

J. Uma Maheshwari, Ph.D.

Bappaditya Manna, Ph.D.

Shashank Bishnoi, Ph.D.

Arun Kumar, Ph.D.

Tanusree Chokrabarty, Ph.D.

Dipti Ranjan Sahoo, Ph.D.

Abhijit Ganguli, Ph.D.

Dhanya C.T., Ph.D.

Arvind K. Swamy, Ph.D.

Sumedha Chakma

Emeritus Fellow

T.K. Datta

A.K. Nagpal, Ph.D.

Senior Programmer

M. Malikharjuna Rao, M.E.

Department of Computer Science & Engineering

Professor and Head

Huzur Saran, Ph.D.

Professors

Amit Kumar, Ph.D.

Anshul Kumar, Ph.D.

S. Arun Kumar Ph.D.

M. Balakrishnan, Ph.D.

S. Banerjee, Ph.D.

Naveen Garg, Ph.D.

S.K. Gupta, Ph.D.

Prem Kumar Kalra, Ph.D.

Saroj Kaushik, Ph.D.

Preeti Ranjan Panda, Ph.D.

Sanjiva Prasad, Ph.D.

Sandeep Sen, Ph.D.

Pankaj Jalote, Ph.D.

Associate Professors

Amitabh Bagchi, Ph.D.

Subodh Kumar, Ph.D.

Kolin Paul, Ph.D.

Assistant Professors

Ragesh Jaiswal, Ph.D.

Sorav Bansal, Ph.D.

Smruti R Sarangi, Ph.D.

V.J. Ribeiro, Ph.D.

Maya Ramanath, Ph.D.

Aaditeshwar Seth, Ph.D.

Parag Singla, Ph.D.

Emritus Fellow

K.K. Biswas, Ph.D.

Department of Electrical Engineering

Professor and Head

B. Bhowmik (Ms.), Ph.D.

Professors

P.R. Bijwe, Ph.D.

Ranjan Bose, Ph.D.

G. Bhuvaneswari (Ms.), Ph.D.

Devi Chadha (Ms.), Ph.D.

Vinod Chandra, Ph.D. (Rtd. Re-employed)

S. Chaudhury, Ph.D.

M. Hanmandlu (Rtd. Re-employed)

V.K. Jain, Ph.D.

Jayadeva, Ph.D.

S.D. Joshi, Ph.D.

I.N. Kar, Ph.D.

Faculty in Position

Subrat Kar, Ph.D.
M.J. Kumar, Ph.D.
R.K. Mallik, Ph.D.
Sukumar Mishra, Ph.D.
Shankar Prakriya, Ph.D.
Surendra Prasad, Ph.D. (Retd. Re-employed)
K.R. Rajagopal, Ph.D.
Bhim Singh, Ph.D.
M. Veerachary, Ph.D.
G.S. Visveswaran, Ph.D.
M. Veerachary, Ph.D.
G.S. Visveswaran, Ph.D.

Associate Professors

Manav Bhatnagar, Ph.D.
Shouribrata Chatterjee, Ph.D.
Swades K. De, Ph.D.
Brijesh Lal, Ph.D.
Mashuq-un-Nabi, Ph.D.
B.K. Panigrahi, Ph.D.
Sumantra Dutta Roy, Ph.D.
Nilanjan Senroy, Ph.D
Madhusudan Singh

Assistant Professors

Abhijit R. Abhyankar, Ph.D.
Sumeet Agarwal, Ph.D.
Shubhendu Bhasin, Ph.D.
Anuj Dhawan, Ph.D.
Amit Kumar Jain, Ph.D.
S. Janardhanan, Ph.D.
Umesh Kumar, Ph.D.
Saif Khan Mohammed, Ph.D.
Mukul Sarkar, Ph.D.
Saunak Sen, Ph.D.
Kushal Kumar Shah, Ph.D.
Uday Kiran Khankhoje, Ph.D.
Turbo Majumdar, Ph.D.
Abhisek Dixit, Ph.D.
Bhaskar Mitra, Ph.D.
Tarun K. Chandrayadula

Emeritus Fellow

H.M. Gupta, Ph.D.
R.K.P. Bhatt, Ph.D.
R.K. Patney, Ph.D.

Department of Humanities & Social Sciences

Professor and Head

V. Sanil, Ph.D.

Professors

Bijoy H. Boruah, Ph.D.
Ravinder Kaur (Ms), Ph.D.
R.B. Nair (Ms.), Ph.D.
Ambuj D. Sagar, Ph.D.
Purnima Singh, Ph.D.
A. Srinivasan (Ms.), Ph.D. (Rtd. Re-employed)
C.A. Tomy, Ph.D.
V. Upadhyay, Ph.D.

Associate Professors

Vibha Arora, Ph.D.
Angelie Multani, Ph.D.
Bharati Puri, Ph.D.
Kamlesh Singh, Ph.D.
Simona Sawhney

Assistant Professors

Ankush Agarwal, Ph.D.
Arudra Venkata Burra, Ph.D.
Pritha Chandra, Ph.D.
Divya Dwivedi, Ph.D.
Arjun Ghosh, Ph.D.
Farhana Ibrahim, Ph.D.
Naveen Thayyil Kamaluddin, Ph.D.
Stuti Khanna, Ph.D.
Reetika Khera,
Richa Kumar, Ph.D.
Debasis Mondal, Ph.D.
Saurabh Bikas Paul, Ph.D.
Rajakrishnan Rajkumar, Ph.D.
Sarbeswar Sahoo, Ph.D.
Paroma Sanyal, Ph.D.
Upasana Sharma, Ph.D.
Jayan Jose Thomas, Ph.D.
Varsha Singh

English Language Instructor

M.S. Bharti Shokeen, Ph.D.
Rajiv Ranjan Mahto, Ph.D.

Department of Management Studies

Professor and Head

Kanika T. Bhal (Ms.), Ph.D.

Professors

M.P. Gupta, Ph.D.
P.K. Jain, Ph.D.
Ravishankar, Ph.D.
Sudhir K. Jain, Ph.D.
Sushil, Ph.D.
S.S. Yadav, Ph.D.

Associate Professors

Mahim Sagar, Ph.D.
Seema Sharma (Ms.), Ph.D.
P. Vigneswara Ilavarasan, Ph.D.

Assistant Professors

Harish Choudhary, Ph.D.
Jitendra Madan, Ph.D.
Surya Prakash Singh, Ph.D.
Shuchi Sinha (Ms.), Ph.D.
Shveta Singh (Ms.), Ph.D.
Smita Kashiramka
Sanjay Dhir

Emeritus Fellow

D.K. Banwet, Ph.D.

Department of Mathematics

Professor and Head

B.S. Panda, Ph.D.

Professor

B. Chandra, Ph.D.
R.K. Sharma, Ph.D.
S.C. Sekhara Rao
A. Tripathi
N. Chatterjee, Ph.D.
S. Dharmaraja, Ph.D.
Subiman Kundu, Ph.D.

Associate Professors

Aparna Mehra, Ph.D.
Anima Nagar, Ph.D.
K. Sreenadh, Ph.D.

Assistant Professors

Hirish Kumar, Ph.D.
N. Shravan Kumar, Ph.D.
Mani Mehra, Ph.D.
Amit Priyadarshi, Ph.D.
Sivnathan Sampath, Ph.D.
Ritumoni Sarma, Ph.D.
Anuradha Sharma, Ph.D.
V.V.K. Srinivas Kumar, Ph.D
Rupam Barman

Emeritus Fellow

Suresh Chandra

Department of Mechanical Engineering

Professor and Head

S.R. Kale, Ph.D.

Professors

Naresh Bhatnagar, Ph.D.
Anoop Chawla, Ph.D.
S.G. Deshmukh, Ph.D.
J.K. Dutt, Ph.D.
Kshitij Gupta, Ph.D.
Sanjeev Jain, Ph.D.
Sangeeta Kohli, Ph.D
D. Ravi Kumar, Ph.D.
Sudipto Mukherjee, Ph.D.
Sunil Pandey, Ph.D.
P.V. Rao, Ph.D.
P.V. Madhusudhan Rao, Ph.D.
M.R. Ravi, Ph.D.
Anjan Ray, Ph.D.
S.K. Saha, Ph.D.
S.P. Singh, Ph.D.
P.M.V. Subbarao, Ph.D.
Kiran Seth, Ph.D. (Retd. Re-employed)

Associate Professors

A.D. Gupta, M.Tech.
S. Aravindan, Ph.D.
Ashish K. Darpe, Ph.D.
Sudarsan Ghosh, Ph.D.
Harish Hirani, Ph.D.
Sunil Jha, Ph.D.
M.S. Kulkarni, Ph.D.
S.V. Modak, Ph.D.
Pulak Mohan Pandey, Ph.D.
Prabal Talukdar, Ph.D.
R.K Pandey, Ph.D.

Assistant Professors

Nomesh B. Bolia, Ph.D.
Subhra Datta, Ph.D.
Amit Gupta, Ph.D.
Vipul Jain, Ph.D.
B. Premachandran, Ph.D.
Supreet Singh Bahga, Ph.D.
Devendra Kumar Dubey, Ph.D.

Emeritus Fellow

T.K. Kundra, Ph.D.

Department of Physics

Professor and Head

K. Thyagarajan, Ph.D.

Professors

Ajit Kumar, Ph.D.
Arun Kumar, Ph.D.
H.C. Gupta, Ph.D.
R. Chatterjee (Ms.), Ph.D.
Sujeet Chaudhary, Ph.D.
B.D. Gupta, Ph.D.
Joby Joseph, Ph.D.
Neeraj Khare Ph.D.
Bodh Raj Mehta, Ph.D.
Dalip Singh Mehta, Ph.D.
G.B. Reddy, Ph.D.
Anurag Sharma, Ph.D.
M.R. Shenoy, Ph.D.
R.K. Soni, Ph.D.
Pankaj Srivastava, Ph.D.
P. Senthil Kumaran, Ph.D.

Associate Professors

Versha Banerjee (Ms.), Ph.D.
Mukesh Chander, Ph.D.
Sankalpa Ghosh, Ph.D
Shantanu Ghosh, Ph.D.
Hitendra Kumar Malik, Ph.D.
Amrita Mishra (Ms.), Ph.D.
G.V. Prakash, Ph.D.
J.P. Singh, Ph.D.
Rajendra Singh, Ph.D.
Aloka Sinha (Ms.), Ph.D.
A.K. Shukla, Ph.D.
R.D. Tarey, Ph.D.
R.K. Varshney, Ph.D.

Assistant Professors

Kedar Khare, Ph.D.
Pranaba Kishor, Ph.D.
Amartya Sengupta, Ph.D.
Joyee Ghosh, Ph.D.
Pintu Das, Ph.D.

Emeritus Fellow

Vikram Kumar, Ph.D.
S.C. Kashyap, Ph.D.
V.D. Vankar, Ph.D.

Department of Textile Technology

Professor and Head

R. Chattopadhyay, Ph.D.

Professors

Ashwini K. Agrawal, Ph.D.
R. Alagirusamy, Ph.D.

Faculty in Position

B.K. Behera, Ph.D.
Apurba Das, Ph.D.
Bhuvanesh Gupta, Ph.D.
Deepti Gupta (Ms.), Ph.D.
S.M. Ishtiaque, Ph.D.
Manjeet Jassal (Ms.), Ph.D.
Mangla Joshi (Ms.), Ph.D.
Kushal Sen, Ph.D.
R.S. Rangasamy, Ph.D.
V.K. Kothari, (Retd. Re-employed)

Associate Professors

Dipayan Das, Ph.D.
Sourabh Ghosh, Ph.D.
Abhijit Majumdar, Ph.D.

Assistant Professors

B.S. Butola, Ph.D.
S. Mukhopadhyay, Ph.D.
Bhanu Nandan, Ph.D.
Amit Rawal, Ph.D.
Rajiv K. Srivastava, Ph.D.

Emeritus Fellow

B.L. Deopura, Ph.D.
M.L. Gulrajani, Ph.D.

Centre for Applied Research in Electronics

Professor and Head

Arun Kumar, Ph.D.

Professors

R. Bahl, Ph.D.
Ananjan Basu, Ph.D.
Sudhir Chandra, Ph.D.
S.K. Koul, Ph.D.
B.S. Panwar, Ph.D.
Suneet Tuli, M.Tech.

Associate Professors

Monika Aggarwal (Ms), Ph.D.

Assistant Professors

Mahesh P. Abegaonkar, Ph.D.
Karun Rawat, Ph.D.

Centre for Atmospheric Sciences

Professor and Head

A.D. Rao, Ph.D.

Professors

Pramila Goyal (Ms.), Ph.D.
Maithili Sharan, Ph.D.
O.P. Sharma, Ph.D. (Retd. Re-employed)
S.K. Dash, Ph.D. (Retd. Re-employed)
Manju Mohan (Ms.), Ph.D.

Associate Professors

Krishna Achuta Rao, Ph.D.
H.C. Upadhyay, Ph.D.
Somnath Baidya Roy

Assistant Professor

Sagnik Dey, Ph.D.
Vimlesh Pant, Ph.D.
Saroj Kanta Mishra, Ph.D.
Dilip Ganguly, Ph.D.

Senior Scientific Officers-I

P. Agarwal (Ms.), Ph.D.

Centre for Biomedical Engineering

Professor and Head

Sneh Anand (Ms.), Ph.D.

Professors

A.R. Ray, Ph.D. (Retd. Re-employed)
Veena Koul (Ms.), Ph.D.
Harpal Singh, Ph.D.

Associate Professor

Nivedita K. Gohil (Ms.), Ph.D.
Anuradha Godavarty (Ms.), Ph.D.

Assistant Professors

S.K. Jha, Ph.D.
Anup Singh, Ph.D.
S.M.K. Rahman, M.Tech.
Dinesh Kalyanasundaram, Ph.D.

Emeritus Fellow

Dinesh Mohan, Ph.D.

Computer Services Centre

Professor and Head

Arun Kumar S, Ph.D.
Subhashish Banerjee, Ph.D. (Assoc. Head)

Sr. System Programmers

Pravanjan Kumar Baboo, Ph.D.
Savita Goel (Ms.), Ph.D.
Pradeep Kumar Gupta
Sriram Hegde
Pragya Jain (Ms.) Ph.D.
Rajeshwari Raghvan (Ms.)
K. Narayanan

Senior Programmers

Rajesh Bhat, Ph.D.
R.K. Chauhan, M.C.A.
Jaya, M.Tech.
Sunil Kak, M.Tech.
Ram Lal, M.Sc.
Gopal Krishan, M.Sc.
Jayashree Santosh (Ms.), Ph.D.

Senior Manager

N.C. Kalra, M.Tech.

Educational Technology Services Centre

Professor & Head

Sanjeev Sanghi, Ph.D.

Centre for Energy Studies

Professor and Head

R.P. Sharma, Ph.D.

Professors

T.S. Bhatti, Ph.D.
Viresh Dutta, Ph.D.
M.G. Dastidar, Ph.D. (Retd. Re-employed)
A. Ganguly, Ph.D.
T.C. Kandpal, Ph.D.
S.C. Kaushik, Ph.D.
G.N. Tiwari, Ph.D.
D.K. Sharma, Ph.D. (Retd. Re-employed)

Associate Professors

K.A. Subramanyan, Ph.D.

Assistant Professors

K. Vamsi Krishna
Ramesh Narayanan, Ph.D.
R. Uma, Ph.D.
Ashu Verma, Ph.D.

Emeritus Fellow

S.C. Mullick, Ph.D.
L.M. Das, Ph.D.

Industrial Tribology, Machine Dynamics & Maintenance Engineering Centre

Professor and Head

O.P. Gandhi, Ph.D.

Professors

Jayashree Bijwe, Ph.D.
Naresh Tandon, Ph.D.
V.K. Agarwal, Ph.D.

Design Engineer

R.K. Rai, M.Tech.

Assistant Professors

Deepak Kumar, Ph.D.

Instrument Design & Development Centre

Chief Design Engineer (SG) and Head

D.T. Shahani, Ph.D.

Professors

Chandra Shakher, Ph.D.
N.K. Jain, Ph.D. (Retd. Re-employed)
A.L. Vyas, Ph.D. (Retd. Re-employed)

Assistant Professors

Jyoti Kumar, Ph.D.
Gurfan Sayeed, Ph.D.
Sumer Singh, Ph.D.

Chief Design Engineers (SG)

A.K. Agarwala, M.S.
S.K. Atreya, D.I.I.T.

Centre for Polymer Science & Engineering

Professor and Head

Veena Choudhary, Ph.D.

Professors

A.K. Ghosh, Ph.D.
S.N. Maiti, Ph.D.

Associate Professor

Josemon Jacob, Ph.D.
Bhabani Kumar Satapathy, Ph.D.

Centre for Rural Development & Technology

Professor & Head

Satyawati Sharma (Ms.), Ph.D.

Professors

Rajendra Prasad, Ph.D. (Retd. Re-employed)
Santosh, Ph.D.
S.N. Naik, Ph.D.
V.K. Vijay, Ph.D.

Associate Professors

V.M. Chariar, Ph.D.
Anushree Malik (Ms.), Ph.D.

Assistant Professors

Hariprasad P., Ph.D.

National Resource Centre for Value Education in Engineering

Professor & Coordinator

Sangeeta Kohli, Ph.D.

Bharti School of Telecommunication Technology and Management

Professor & Coordinator

Ranjan Bose, Ph.D.

Amar Nath and Shashi Khosla School of Information Technology

Professor & Coordinator

Sanjiva Prasad, Ph.D.

School of Biological Sciences

Professor & Co-ordinator

B. Jayaram, Ph.D.

Professors

Tapan Kr. Choudhari, Ph.D.
C.S. Dey, Ph.D.
James Gomes, Ph.D.
Seyed E. Hasnain, Ph.D.
Aditya Mittal, Ph.D.

Associate Professors

Bishwajit Kundu, Ph.D.

Assistant Professors

Manidipa Banerjee, Ph.D.
Archna Chug, Ph.D.
Vivekanandan Perumal, Ph.D.
Ashok Kumar Patel, Ph.D.

Interdisciplinary / Transportation Research and Injury Prevention Programme (TRIPP)

Professor and Co-ordinator

S.R. Kale, Ph.D.

Central Workshop

Professor & Head

Naresh Bhatnagar, Ph.D.

Interdisciplinary Opto-Electronics & Optical Communication Research Programme

Professor and Co-ordinator

M.R. Shenoy, Ph.D.

New Appointments, Retirements etc.

(April 1, 2013 - March 31, 2014)

37 new faculty members have joined the Institute this year. These new additions to our faculty have enhanced our competence in several emerging areas, while bringing new energy into our academic endeavours.

Table I : New Appointments

New Faculty joined	
Arvind Agarwal, Applied Mechanics	Madhusudan Singh, Electrical Engineering
Somnath Baidya Roy, Atmospheric Science	Turbo Majumder, Electrical Engineering
Karun Rawat, Applied Research	Simona Sawhney, Humanities
Dinesh Kalyanasundaram, Biomedical Engineering	Varsha Singh, Humanities
Anup Singh, Biomedical Engineering	Smita Kashiramka, Management Studies
Anuradha Godavarty, Biomedical Engineering	Sanjay Dhir, Management Studies
Sandeep Kumar Jha, Biomedical Engineering	Devendra Kumar Dubey, Mechanical Engineering
Hariprasad P., CRDT	Supreet Singh Bahga, Mechanical Engineering
Manojkumar Charandas Ramteke, Chemical Engineering	Pintu Das, Physics
Divesh Bhatia, Chemical Engineering	Joyee Ghosh, Physics
Jyoti Phirani, Chemical Engineering	Rupam Barman, Mathematics
Mohammad Ali Haider, Chemical Engineering	Shaikh Ziauddin Ahammad, DBEB
Hemant Kumar Kashyap, Chemistry	Ashok Kumar Patel, Biological Sciences
Pravin Popinand Ingole, Chemistry	Deepak Kumar, ITMMEC
Ravi P. Singh, Chemistry	Vijay Kumar, Library
Sumedha Chakma, Civil Engineering	Bikram Kishore Beura, Library
Uday Kiran Khankhoje, Electrical Engineering	Vanita Khanchandani, Library
Abhisek Dixit, Electrical Engineering	Narender Kumar, Library
Bhaskar Mitra, Electrical Engineering	

The list of faculty who resigned or retired or expired in the given period is given below (Table: II):

Table II : Retirements/ Resignations/ Bereavements

Retirements	
M.N. Gupta, Chemistry	N.K. Jain, IDDC
U.C. Mohanty, Atmospheric Science	M.G. Dastidar, Energy Studies
Surindra Prasad, Electrical Engineering	Vinod Chandra, Electrical Engineering
B.N. Jain, Computer Science & Engineering	B.P. Pal, Physics
Sushil Kumar Dash, Atmospheric Science	Amrit Srinivasan, Humanities
V.K. Kothari, Textile Technology	Om Prakash Sharma, Atmospheric Science
A.L. Vyas, IDDC	Rajendra Prasad, CRDT
Alok Ranjan Ray, Biomedical Engineering	D.K. Sharma, Energy Studies
Ram Nath Ram, Chemistry	M. Hanmandlu, Electrical Engineering
D.K. Pandya, Physics	
Resigned	
Anil Sawhney, Civil Engineering	Manish Sharma, Applied Research
B. Munwar Basha, Civil Engineering	Ruchi Sharma, Management Studies
Praveen Kaul, DBEB	

9. Student Activities

(April 1, 2013 - March 31, 2014)

Student Activities

(April 1, 2013 - March 31, 2014)

Considerable efforts are made to see that students lead a balanced campus life in harmony with their teachers and fellow students. To ensure that freshers settle down in their new surroundings comfortably, a Freshers' Orientation Programme was organized at the beginning of the academic session.

Counselling Service provides counselling to students on adjustment problems or for the problems arising from financial hardship, and emotional/psychological problems affecting academic pursuits.

Outside the classrooms, facilities for a variety of cocurricular activities, sports, games, student publication etc. are provided for the overall growth and development of students' potentialities and initiative with an emphasis on responsible student leadership.

The pace and mode of student life on the campus is planned and implemented by the following student bodies:

1. Students Affairs Council (SAC) and its five Boards, i.e.,
   (a) Board for Hostel Management (BHM)
   (b) Board for Recreational & Creative Activities (BRCA)
   (c) Board for Sports Activities (BSA)
   (d) Board for Student Publications (BSP)
   (e) Board for Student Welfare (BSW)
2. National Service Scheme (NSS)
3. National Cadet Corps (NCC)
4. Student Counselling Service (SCS)
5. Student-Teacher Interaction Committee (STIC)
6. National Sports Organization (NSO)
7. Departmental Professional Societies.

1. STUDENT AFFAIRS COUNCIL (SAC)

The Students Affairs Council has been quite active. Regular meetings took place between the various representatives of SAC, to ensure that all facts of student issues were discussed. SAC representatives also interacted with student member of senate and other SAC committees to ensure wider participation of students in the affairs of the institute. Many student related issues were discussed. Maintenance problems of hostels and the institute, the no dues process for students, library and computer related issues, as well as safety and security issues were also resolved . Openness in the decision making process of various boards and improvements in the student election process were other matters that were discussed. Another important issue that was raised at SAC was the need for improved student teacher interaction. A student Mentorship Programme to provide consulling of first year students was enhanced. The process of restructring of Boards and constitution review of the student bodies was also started by SAC. The two standing committees of the SAC, namely the Coordination Committee and the Executive Committee contributed as usual in tackling of various issues referred to them.

a. Board for Hostel Management (BHM)

The Board for Hostel Management is an important Board in the SAC to decide the students issues directly.

There are eleven hostels for boys, six with a capacity in the range of 400-450, two with a capacity of 1000 and the others in the range 300-350 each; two hostels for girls students with a capacity of about 500 each. In addition, there is also very limited accomodation for married students. Each hostel has a House Working Committee which decides the pace and pattern of its life. The Board for Hostel Management, with the Dean of Students as the ex-officio president, coordinates the working of all hostels. The Dean of Students is the head of hostel organization. He is assisted in his administrative responsibilities by the Hostel Management, Students Welfare, Associate Dean, Events and the Assistant Registrar (Student Affairs). The BHM has representation from all the hostel and takes decisions on all problems of common interest. The warden is the administrative head of each hostel. He/ She is a faculty member of the Institute. The House Working Committee of each hostel is chaired by the House Master who is a professor of the Institute. The committee consists of the Warden, the House Secretary, the Mess Secretary, the Sports Secretary, the Cultural Secretary, the Maintenance Secretary, and the representatives from all classes.

Right from the beginning of this academic year, hostel maintenance problems were undertaken. A number of meetings with the Dean of Students, wardens, hostel functionaries, Institute Engineer and engineering staff were held. For proper implementation of maintenance

schedules, long-term and short-term problems were identified and engineering staff visits to each hostel for monitoring work. Special efforts were made towards the cleaning of common areas.

Security problems in each hostel were reviewed and detail discussion with the wardens, students and security personnel's was held.

Considerable efforts were made for providing accommodation to all students.

Continuing dialogue between the mess staff, student representatives and authorities has resulted in better work environment. Five BHM employees were rewarded by special awards for the hard work and excellent services rendered to the Organization. This Award was given on Independence Day during the flag hoisting function. This has been a morale booster for the workers. Regular meetings with the staff improved their punctuality.

The Wardens/House Masters during 2013-14

Hostel	Warden	House Master
Aravali	Dr. B.K. Panigrahi	Prof. K.Gupta
Jwalamukhi	Dr. Shashank Deep	Prof. S.M. Ishtiaque
Kailash	Dr. (Ms.) Seema Sharma	Prof. (Ms.) Manju Mohan
Karakoram	Dr. M.S. Kulkarni	Prof. Anurag Sharma
Kumaon	Dr. P.M. Pandey	Prof. Ashok Gupta
Nilgiri	Dr. Abhijit Majumdar	Prof. Shashi Mathur
Shivalik	Dr. Dipayan Das	Prof. Bhim Singh
Vindhyachal	Dr. Diptiranjan Sahoo	Prof. Viresh Dutta
Himadari	Dr. (Ms.) S. Upadhayaulu	Prof. (Ms.) Sneh Anand
Satpura	Dr. S.K. Pattanayek	Prof. S.N. Singh
Zanskar	Dr. Prabal Talukdar	Prof. Kushal Sen
Girnar	Dr. D. Sundar	Prof. R. Chattopadhyaya
Udai Giri	Dr. S.R. Sarangi	Prof. B.R. Mehta
Nalanda	Prof. P.M.V. Subbarao	

This year was devoted to improve the food quality in hostel mess. Regular meetings with Dean of Student, Hostel Representatives and Mess Supervisors have been held for the same purpose. Modifications assured for Scheme (MAO) is being implemented for BHM staff.

A BHM dinner was organized during the Student's Week. Each hostel immaculately arranged its counters at a central place. Faculty and students attended with enthusiasm. The cultural programme was a big attraction for the evening. The Kailash and Kumaon Hostel was given BHM trophy and BHC trophy to Kumaon Hostel for their excellent outstanding work.

BHM also arranged the stay and messing for all the delegates of Rendezvous' 2013 and TRYST' 2014 events very successfully.

To simplify the recovery of dues from students, a regular monitoring system has been introduced involving simplified system of payment, by which the students sign a declaration form and the amount is automatically deducted from their bank account, avoiding any personal bank transaction on this account. Use of computers for maintenance of hostel accounts has been in existence from past six years and the staff working in the hostels was encouraged to undergo training in the use of PCs.

Each Hostel was in the forefront in initiating and hosting the celebration on the independence Day and the Republic Day functions at the Institute level.

Hostel Mess Secretaries put in considerable efforts in controlling food wastage and thus were able to keep a check and balance of galloping mess bills. By proper coordination between the students and the wardens, the supply system was improved and new supplies were identified and added.

There were surprise checks by canteen cells for institute canteens. Manopoly of supplies has been reduced by attaching 2-3 suppliers to each hostel.

b. Board for Recreational and Cultural Activities (BRCA)

2013-14 witnessed, what is perhaps the most significant change in the structure as well as the philosophy of BRCA ever since its inception in 1969. The aim of restructuring was to replace the rigid and regimental structure of inter-hostel competitions with a more open and democratic framework of extra-curricular activities in the institute. Under the new structure, competitive teams were made up of students across several hostels. For the first time ever, girls and boys came together in teams and several clubs came together to plan and showcase events. BRCA extended its reach to involve faculty members, staff members as well as their families, to promote a feeling of kinship and bonhomie amongst members of the IITD community. Clubs explored a multitude of event formats including competitions, workshops, lectures, discussions and visits in order to induce vibrancy, excitement and creativity.

As a part of the Board's restructuring, clubs were split and merged. The new clubs are - Dance Club, Dramatics Club, Debating Club, Literary Club, Fine Arts and Crafts Club, Photography and Film Club, Music Club, Quizzing Club, SPIC MACAY and Hindi Samiti.

The academic session started with the "Orientation to BRCA events for Freshers" in August 2013, which saw all ten clubs come together to put up a gala show. The 3 hour event witnessed a Dogra Hall filled to capacity wherein freshers cheered, danced and sang with seniors as they were introduced to the vibrant

extra-curricular realm of IIT Delhi. Other highlights of the year were the inception of a Book Reader's Circle and a visit to the Jaipur Lit Fest by the Literary Club. The Photography and Film club organised a highly successful 3 day PFC weekend which witnessed an impressive participation. Hindi Samiti organised a panel discussion on "Aaj ki peedi Mahabharat se kya seekh leti hai' to provide the students a platform to express their views on matters of cultural interest. In "Narendra Kohli ke saath ek Samvad', the renowned Hindi author gave a motivating and inspirational talk. Discussion on "Urdu hai Jiska Naam" featured the eminent Urdu scholar Mr Sadiq in an interactive session with the students. The Fine arts and Crafts club introduced a host of new competitions that enjoyed participation in large numbers from freshers as well as seniors. Their oil painting exhibition in the Exhibition Hall attracted a wide audience.

The Music club organised "Mehfil", a competition of ghazals and qawwalis which witnessed a jam-packed Seminar hall. The event featured some stellar performances in this genre of Indian music and saw active participation from faculty as well as staff members. Selected performances can be viewed at http://www.youtube.com/watch?v=UwpI_AZaE-c

The year saw students reach attain new heights and cause waves outside IIT as well. Most notable were performances by V-Defyn - the institute group dance team, which won as many as 13 dance competitions in different colleges across Delhi. One of the IIT Delhi debating teams made it to the knock-out stages in the Indian National Debate Challenge (INDC), a feat that hasn't been achieved in past several years.

Rendezvous 2013 was the biggest yet in terms of the budget, variety, number and stature of Indian and International artists that it hosted. It featured over 18 music bands including the Grammy nominee Ten Drums of Taiwan, Hoobastank from the US, Farhan Akhtar Live, Agnee and Parikrama. About ten thousand people from six hundred different colleges participated in various competitive and informal events showcasing some outstanding performances.

c. Board for Sports Activities (BSA)

Sports and games are essential components of human resource development, helping to promote good health and spirit of healthy competition, which, in turn, has positive and deep impact on the holistic development of personality of the Youth- a potential source of energy, enthusiasm and inspiration. Sports being practical way of education, facilitate recreation, foster social harmony, inculcate discipline and dedication in general life. Board for Sports Activities (BSA) had been looking after this important component for the development of sports environment in the campus.

Introduction

The Board for Sports Activities is a constituent body of the Student Affairs Council. It is responsible for the coordination of the various sports activities in the institute. It ensures that adequate facilities are given to sportspersons and provides a forum for the students and staff to discuss and formulate policy towards the betterment of sports activities in the campus. The BSA consists of the following members

- President, BSA
- Vice-President, BSA
- Game/Club Presidents.
- All Institute Team Captains and Vice-Captains.
- All Club Secretaries.
- Sports Officer
- Sports Secretaries of Student Hostels.
- General Secretary, BSA.
- Deputy General Secretary, BSA.
- Immediate past General Secretary, BSA.

Facilities

Well laid out fields are available on the campus. A cricket field with three turf wickets, four cricket practice pitches, floodlighted hockey and football ground, three floodlighted volleyball and two basketball courts one of which is ultra-cushioned, eight floodlighted tennis courts having four synthetic and four clay courts, tennis practice wall, three squash courts, one badminton hall, table tennis hall with synthetic flooring, one weight lifting hall, a swimming pool, two multi-gyms, a floodlighted stadium with 400 meters athletics track,

jogging track and ancillary arrangements for all the games are available to the students. Construction of new swimming pool with kid's pool is in progress and will be available very shortly. Construction of one badminton hall which will be having five wooden badminton courts and floodlighting of cricket practice pitches is also under consideration. A team of sports officer, physical training instructors, ground staff and part-time coaches help the students in their pursuit to greater sporting performances.

Activities

The Institute lays considerable emphasis on student's participation in various outdoor and indoor games. The Institute is in constant contact with the local associations in almost all the games to give outlet to the students for participation in different games outside the campus. With participation in these activities, students are able to use their leisure time in a desirable manner. In these activities, emphasis is laid on mass participation by the students. The students take part in the Fresher's event for incoming first year students, friendly matches with the local colleges, inter-hostel events, the annual IIT Delhi inter-collegiate event 'Sportech' and the annual inter-IIT sports meet.

Inter Hostel matches were organized in Football, Volleyball, Swimming, Water Polo, Wt. Lifting, Hockey, Squash, Badminton, Table Tennis, Tennis, Athletics, Basketball and Cricket. Kumaon hostel was declared the winner and Karakoram hostel was declared runners up in the men's section. Kailash hostel was declared winner in the women's section.

Sportech, which over the years has carved a niche for itself with regards to the scale at which it is organized and the kind of varied participation it enjoys was organized from 27th Feb. 14 to 2nd March 2014. All the major games and sports were organized in this four days event. About one hundred fifty teams of various colleges took part this year.

49th Inter IIT Sports Meet was held at IIT Guwahati in the months of October and December 2013. IIT Delhi contingent consisting of 123 boys and 39 girls participated in the sports meet. Miss Anita Meena, member of IIT Delhi athletics team broke the Inter IIT Sports Meet record in 800 meters. Both, Badminton men and women teams and Football team won Gold medal in the meet. Inter IIT Staff Sports Meet was also organized in IIT Guwahati. IIT Delhi contingent consisting of 55 men and 5 women participated and won the runner's upl championship.

Those who excel in any sports activities like inter IIT sports meet are given various certificates, prizes and awards including IiT Delhi Blazers & Blues, etc. This year as recognition of the student's talent in sports and their persistent effort for the development of sports environment, eight students were awarded Blazers, thirteen students were awarded Colours in different games and other awards were also given. Mr. Hemant Meena was awarded Outstanding Sportsperson of the year award. Football team was awarded with best team of the year award.

Sports is included in the curriculum at ITD. National Sports Organization (NSO) activities are organized by the sports unit as an alternative to NCC and NSS. Around two hundred fifty undergraduate students are register in this every year and get specialized training in games and sports as well as physical fitness. Regular classes are conducted for these students by the physical education staff of the Institute for four days a week in each semester. Regular participation in these activities not only improve the general physical fitness level of the students but also helps in developing psychological attributes like leadership qualities, stress management and group dynamics.

d. Board for Student Publications (BSP)

The structure of BSP was changed significantly this year by changing to a non-competitive and selection based procedure as opposed to the election based team formation of the other boards. The Journalism Cell was empowered in the new structure while the focus of the Creative Writing Cell shifted from quantity to quality. The work shifted away from hostel and became more institute based with the entire team working for the spirit of the Board.

The Journalism Cell became a reliable source of information for the entire institute with coverage of events spanning all Boards. Institute Lectures and Guest Lectures were given special preference. Apart from covering of events, the team worked collectively on four newsletters over the course of the year.

The Creative Writing and Outreach Cell organized a number of events during the course of the year along with four magazines; a magazine with special focus on the freshers, two technical journals and a creative writing magazine.

The newly created Media and Web Cell helped with video and photographic coverage of events on camps spread throughout the year.

The Inception : Fresher Magazine, July 2013
The Inquirer : Newsletter Volume 1, August 2013
Sync : Tech Magazine, Volume 1, October 2013
The Inquirer : Newsletter Volume 2, November 2013
The Inquirer : Newsletter Volume 3, January 2014

Sync : Tech Magazine, Volume 2, March 2014

Muse : Annual Creative Writing Magazine, February 2014 (launched by Dean of Students on BHM night)

Literati 2013: The 3-day literary festival saw enthusiastic students coming in from across the city to attend various book discussions, workshops on writing and designing skills, quizzes, stand-up comedy and plethora of other events. Starting from Prabhu Chawla, who inaugurated the opening ceremony for the festival, multiple prominent speakers graced the events, interacting with students, taking part in discussions and sharing their experiences. The fest also had workshops on etymology and photojournalism, with competitive literary events which were heavily attended.

New initiatives by BSP Team of 2013-14

- **Fresh @ IITD:** As an effort to make sure students get an experience of the life at IIT, we executed a series of articles and surveys dedicated to the audience that would have been considering IITD as their next home. A PAN IIT survey comparing facilities at the different IITs and department reviews by senior undergraduates, this effort went a long way in putting the people inside in touch with those looking to peek in.
- **Inception:** Rechristening IITD keFundae, this magazine was prepared as a welcome gesture for freshers and one which opened the window of opportunities to explore during their stay at IIT. The first ever color magazine at IITD, it tried to capture the essence of life at IIT, with articles by students from all boards and clubs with a rainbow of experiences.
- **The Inquirer:** The first newsletter of this year tried to cover various issues and IIT related news left uncovered in the previous years - Director's meet with the graduating students: the issues raised there and their current status, Pan-IIT survey, explanation for course registration woes this semester, training and placement status and functioning, summer internship opportunities and experiences and selection procedure for Exchange Program.
- **Campus Surveys:** Various student body issues have been covered through surveys that have been filled by more than a 1000 people each - students, faculty and staff members of IIT. The issues covered in the latest issue of the Inquirer included an opinion on the issue of having a single mid semester exam and another that critically analyzed the satisfaction with the hospital facilities.
- **IITD News:** The Facebook page of BSP which seeks to provide news reports on each and every event in the campus is highly active and has been appreciated by a large audience including IIT Delhi alumni and alumnae. The daily updates - news, happenings, events of various boards, lectures, festivals, et cetera are accompanied by photographs and videos, the element of media that can't be taken care of by print media (here, the newsletter).
- **Campus Social Responsibility (CSR):** Started in the summer vacations, CSR, a new initiative by BSP, is an effort to acknowledge all efforts in and around the campus by various stakeholders working on diverse issues, changing lives each day. Every twice or thrice a week during the summer break, we ran stories of people at IITD going out of their way to make an impact. The idea of this venture is not only to spread information about the extraordinary work being done around us, it is a campaign in itself, awakening the entire community to their social responsibility.

e. Board for Student Welfare (BSW)

BSW continuously strives towards creating a better environment for the students of IIT Delhi. Our initiatives are directed to the convenience of student so as to help them achieve more out of life in IITD. Unlike previous years, BSW in 2013-14 experimented with a new model of functioning as a completely non-competitive board with events now being referred as an initiative. The initiatives taken up by BSW (2013-14) were Rebuilding of BSW website: that includes quick help section, new tabs for new papers, forms, feedback, FAQ, Database of the question papers and lecture videos, Redrafting of BSW diary, assisted the UG section and NRCVEE for registration and orientation program of fresher, organized various trips in Delhi, organized various camps for student welfare, helped in conducting awareness workshops etc. The BSW organized various camps and trips to Akshardham, Auto Expo, Book Fair, Rashtrapati Bhawan etc. for freshers. BSW supported financially weak students by giving loans and grants for hostel fees. BSW also runs a student cooperative society (SCOOP) that arranges for stationary items, notebooks, greetings cards , T-shirts and souvenir of IITD. Numerous other workshops (NRCVEE, self defence, sexuality and RTI, ethical hacking etc) were organized by the BSW time to time.

BSW reps helped in CREST (self enrichment program) conducted during orientation for helping the fresher to improve their speaking skills, remove inhibitions and develop overall confident personality. BSW has an unique programme of student mentorship (SMP) which is working actively. Every fresher is assigned a student mentor from 3rd year. The mentors help freshers for their overall adjustment in campus environment and to help them to analyze various options at different stages of IIT life. It is monitored by MRC (Mentor Review Committee). Speranza, annual socio-welfare youth fest of Indian Institute of Technology Delhi was organized from 13th to 15th Sept 2013. It included various workshops, talk shows, interactive sessions, jeopardy, rendezvous with alumni, panel discussion, MUN (Model United Nations) and a melange of cultural activities. Speranza succeeded in being a youth magnet for the IITD students. Spirit, passion and zeal were explored to its zenith by all the students during the events of Speranza.

2. NATIONAL SERVICE SCHEME (NSS)

In the new academic year 2013-2014, NSS IIT Delhi set out to create a paradigm shift. A shift from its perception just as a curriculum requirement, to that of a large family of en thusiastic volunteers who feel a sense of belonging for this organization. The Orientation for first year students was held on 7th August 2013, which followed with a diverse set of events and regular volunteering activities, both in collaboration with NGOs and direct NSS initiatives.

A lot of new NSS initiatives were started last year. The Liter of Light workshop brought Social Innovation to the fore by lighting the slums of nearby Munirka community by glowing plastic bottles. A bicycle sharing system for campus residents has been planned, while an energy survey was done to identify the energy potential of the campus and measures taken towards realizing the same. The Substance Abuse initiative helped make students realize the ill effects of smoking, wherein students who wished to quit smoking were also helped out with the help of Student Counseling Center. The Music Masti project was started by enthusiastic volunteers to teach Music to unprivileged kids, while a similar initiative was taken to teach Chess to these children.

On the same lines, several projects continued and achieved distinction in their performance. The Munirka and Mess teaching projects were refurbished. The Safe Hands smartphone app developed by Stree and NSS won the prestigious Nina Saxena Excellence in Technology Award instituted by IIT Kharagpur. Stree is NSS' initiative towards Gender Sensitization which spread its reach to several Delhi colleges for the same.

Apart from the regular events like Blood Donation Camps, Collection and Cleanliness Drives, Internships, Nature Walks and Independence Day celebrations, this time there was also an Organ Donation campaign, celebration of International Day of the Girl Child and World Hospice and Palliative Care Day, exposure trips and movie screenings on relevant issues.

The NSS unit represented the college in a youth conference held at BITS Pilani, while the environment team won the 2nd prize in the GreenX competition held at IIT BHU for the Green initiatives taken.

3. NATIONAL CADET CORPS (NCC)

The NCC unit at IIT Delhi is affiliated to 7 Delhi Battalion NCC. The NCC unit IIT Delhi organized the following activities during the preceding year:

- Regular training in foot, arms and ceremonial activities.
- Regular parade drills.
- Parade on the Republic Day, where the Director of IIT Delhi undertook the inspection of the NCC cadets.
- Award for the Best Cadet and the Most Disciplined Cadet were conferred to two of the cadets.
- A winter camp was organized on the IIT Delhi premises in December that involved weapons training, map readingactivities, physical fitness and hygiene, firefighting lectures. Cadets were sent to attend annual training camps that were organized by 7 Delhi NCC Battalion, outside the IIT campus, and the cadets participated with full enthusiasm and zeal. Some cadets were given preparation guidelines for the B- and C- certification examinations which they plan to undertake in the current year.

4. STUDENT COUNSELLING SERVICES (SCS)

Student Counselling Service of IITD aims to support students and their parents (As per their requirement). Counselling entails use of cognitive, behavioural, Rational Emotive, Supportive, Interpersonal and intrapersonal therapies.

Student Counselling Service (SCS) organized various useful workshops for freshers. It provides a confidential environment where a student can explore and express aspects of himself / herself that may be painful or uncomfortable.

With an increase in counsellors in 2013-2014 , the Student Counselling Centre was able to deal with the increasing number of students having concerns. There has been a decrease in waiting time for the students, thus saving their time of waiting for a consultation.

SCS provided a Counselling session with parents during orientation period. Session was aimed at sensitizing parents on handling their wards while at IITD and to help their wards in adjusting to the new environment. Counsellor organized visits to all the hotels during 9th - 13th Sept, 2013. Mentor training programme was conducted by SCS from 5th - 10th August 2013. This training was meant for the core group of mentors to identify students facing problems in different areas of life, to help students at the elementary stage of their problem. and to make referrals to SCS in case of urgent or serious problems.

SCS organized a series of lectures in 2013-2014 for the benefit of first year students of IITD covering various topics for the benefit of students. It was mandatory for the first year students.

5. STUDENT-TEACHER INTERACTION COMMITTEE (STIC)

STIC (Student-Teacher Interaction Committee) tried different initiatives to improve student teacher interaction. For the first time. dinners were organized for all freshers with their teachers who were teaching in 1st semester of 2013-2014. All hostels hosted STIC dinners for their students during both the semesters of 2013-2014. This programme also supports teachers financially to interact with the students of their class. There was encouraging participation of teachers from all the departments to interact with their students using STIC funding. There is provision in STIC to partially fund professional societies of the departments.

10. Social Responsibility

(April 1, 2013 - March 31, 2014)

Social Responsibility

(April 1, 2013 - March 31, 2014)

RELAXATIONS TO SC/ST/OBC/PD STUDENTS AND STAFF

IIT Delhi is sensitive to the need of the students belonging to the SC/ST community and to those who are having disabilities. Special care and attention are paid to them.

Relaxation in Admissions

Admission to the first year of the four-year B.Tech., dual degree and the 5-year integrated M.Tech. programmes is made through the Joint Entrance Examination (JEE) which is held in April and is common for all the IITs and the Institute of Technology, BHU, Varanasi.

- The minimum qualifying marks for SC/ST candidates are specially prescribed at a lower level than those for the general category of students.
- The age limit is also relaxable in their case by five years.
- Candidates declared successful in this category are paid second class railway fare to and fro from the place of their normal residence to the counsellingcentre.

Reservation of Seats

At IIT Delhi, the percentage of seats reserved for SC/ST/OBC/ PD candidates is as follows :

	B.Tech. Dual Deg.& Int. M.Tech.	M.Sc.	M.Tech.	M.Des.	M.B.A.
Scheduled Castes	15	15	15	15	15
Scheduled Tribes	71/2	71/2	71/2	71/2	71/2
OBC	27	27	27	27	27
PD	3	3	3	3	3

Seats reserved for SC/ST/PD candidates that remain unfilled cannot be filled by applicants belonging to other categories and thus remain vacant.

Persons with Disabilities (PD)

For any category of disability (viz., locomotor, visual, speech and hearing), benefit is given to those candidates who have at least 40% permanent physical impairment in relation to a body part/ system/ extremity/extremities/ whole body etc. The candidates in this category are required to be certified by a Medical Board. The Medical Board decides the following:

- Whether the Candidate qualifies for the benefits under this category, and
- if the disability is likely to interfere in his/her studies.

The Medical Board duly constituted for this purpose meets at the time of counselling. The decision of the Medical Board is held final.

SCHOLARSHIPS AND FINANCIAL ASSISTANCE

All SC/ST students are given scholarships and financial assistance as detailed below:

- All SC/ST Students are exempted from payment of tuition fee.
- Free messing (basic menu) and a pocket allowance of Rs. 250 per month in lieu of the merit-cum-means scholarship for the students having annual family income upto 4.5 lacs. In addition, they are exempted from payment of Hostel seat rent.
- All eligible SC/ST students, while on training or doing courses during semester breaks or required to stay in the Institute during semester breaks or exempted from taking meals from hostels due to medical reasons etc. are given payment of 70 per month and a per diem allowance in lieu of free messing on the basis of prevalent average rate of messing charges as applicable from time to time.
- SC/ST students who fail in the examination for the first time continue to receive the free messing subject to a maximum limit of five years.
- SC/ST students are loaned books upto a value of 500 from the book bank without payment of any loan fee. The books are, however, required to be returned at the end of each semester.

Master of Science

Merit-cum-means scholarship of 1,000 per month and free tuition are permissible to M.Sc. students to the extent of 25% of the sanctioned strength subject to a maximum of five in each department. Only those students are eligible whose parents' gross income is less than 4.5 lacs per annum for all categories of students, including SC/ ST students. The terms and conditions of the award of scholarship including conditions for continuation are laid down in the Rules and Regulations and are subject to change from time to time.

PREPARATORY COURSE

A one-year preparatory course is also run for SC/ST/ PD candidates. Candidates admitted to this programme are amongst those who appeared for the JEE but were unsuccessful in qualifying for admission. The number admitted to this programme varies from year to year depending upon the number of SC/ST/PD candidates who were successful in gaining regular admission with the total number of candidates admitted to the regular B.Tech.

Dual Degree Integrated M.Tech. programmes as well as the preparatory course being limited to the above indicated percentage. Preparatory course students undergo zero level courses in Physics, Chemistry, Mathematics and English.

Candidates who successfully complete the preparatory course are eligible to seek admission during the following academic year against the vacant SC/ST/PD seats of the current year. Alternately, in case they desire a discipline of their choice, they must reappear for the JEE in the subsequent year. SC/ST Preparatory course students are also eligible to receive free messing and pocket allowance on the basis of the same norms as for regular undergraduate students belonging to SC/ST category.

OTHER FACILITIES

- Reduction in the academic load in subsequent semester in case they do not maintain the required semester grade point average (SGPA).
- Tutorial type remedial courses with half the normal credits.
- Special courses during the summer vacations to make up for the credit requirements due to reduced load during the regular semesters.
- Counselling service to help such students to better adjust to campus life and environment.

CONCESSIONS ALLOWED TO STAFF

I.I.T. Delhi follows the Government of India rules governing reservation for Scheduled Castes/Scheduled Tribes, OBC and Physically Handicap persons. Appointments made in respect of these categories during the year under report are given below:

No. of Candidates Appointed*					
Groups	Scheduled Castes	Scheduled Tribes	OBC	PD	Total
A	-	-	01	-	01
B	-	01	-	-	01
C	02	-	01	-	03
D	-	-	-	-	-

**Note : These include contract appointments.*

SUMMER RESEARCH FELLOWSHIP PROGRAMME

The main objectives of this programme are - to help inculcate research culture among the faculty members of educational institutions outside the IIT system, to provide orientation towards research through interaction with the mentors and other research students and exposure to the facilities and labs, with a view to eventually motivate them to undertake higher studies and research activities within or outside IIT Delhi. The feedback received from both the fellows and the mentors so far has been quite positive and encouraging. Under the Summer Faculty Research Fellowship Programme of the Institute organized under the CEP, 104 faculty fellows joined this year and they come from 68 different colleges/institutes representing 15 states of the country. They have been associated with a total of 40 faculty mentors. They spent about six weeks during the summer and worked with IIT faculty mentors.

COMMITMENTS IN SUSTAINABILITY

The solar energy park was established in the year 1996 with research funding received from various Government Ministries. In solar energy park, there are low cost mud house, 5 kWpstand alone PV system , underground water pumping, various design of solar still, evacuated solar water heater, integrated PV hybrid active solar still, water heater, air heater, conventional and green house crop dryer, greenhouse cultivation system. Energy and ExergyAnalysis of Solar Thermal devices and systems, PV-T hybrid systems, HVACR Systems and thermal power plants (including combined cycle and Co-generation Power Plants) is being undertaken by CES and some pioneering work has been carried out by CES which is well cited at international level.

ENVIRONMENT

A new "Biogas Development and Training Centre" (BDTC) started in IIT Delhi in the year 2008 and engaged in research and development of biogas related technologies. BDTCs are supported by Ministry of New and Renewable Energy (MNRE) under National Biogas and Manure Management Programme (NBMMP) for providing technical training and publicity support for quality implementation of biogas programme.

BDTC, IIT Delhi is engaged in research and development of biogas related technologies and its applications. In broader terms, BDTC, IIT Delhi is to provide technical support for National Biogas Manure Management Program (NBMMP) on decided areas with Ministry of New and Renewable Energy and coordinate R&D and consultancy work on biogas technology with expertise available in IIT Delhi.

Services of BDTC IIT Delhi:

- R&D related to bio-methanation
- Training and Human Resource Development
- Consultancy services related to biogas technology
- Technical guidance

COMMUNITY

For the second time this year, a 10-day Special Orientation Programme for Entry Level students was conducted for about 120 participants with the objective of enhancing their learning skills, English language and communication skills, inter-personal relationships and motivation. This programme was conducted with the help of Centre for Research and Education for Social Transformation (CREST), Calicut, Kerala. All those who participated in it appreciated the program. The SC Commission had a special word of praise for the Institute's initiative to help students from weaker sections of society through this self-enrichment program.

A group named ASSISTECH was formed at IIT Delhi to design and develop assistive devices for the visually impaired. ASSISTECH was formed more than two years back with the clear objective of "Making a difference in the lives of million plus visually impaired people by the year 2015". At any one time it is an active association of 12 to 15 students who contribute both through academic projects as well as other activities. Specifically the group is working on the following four projects for the visually impaired:

- Smart Cane: An aid for assisting safe mobility
- Bus Identification Device: An aid for assisting use of public buses
- Braille Tutor: A Braille and language learning device
- Disha – Indoor Navigation Device: An aid for independent mobility within the public buildings
- IIT Delhi also encourages students to take part in service of humanity, working for the education of the under-privileged. Voluntary blood donation and tree planting are undertaken.

11. Alumni Contribution

(April 1, 2013 - March 31, 2014)

The Alumni are a very valuable resource for the Institute, and increasingly, they have started to make a difference to the way things are done at IIT Delhi. The Alumni have directly contributed for instituting Chair Professorships, Young Faculty Incentive Fellowships and Student Awards and even for Infrastructure Development.

Some of the contributions from the Alumni in the previous year are listed below and are gratefully acknowledged:

Contributor	Contribution in Rs.	Contribution For
Parampreet Singh Bhasin	**5,00,000/-**	**G.S.Bhasin Scholarship**
Vinod Khosla	**17,24,21,020/- (USD 27,75,000)**	**Amar Nath & Shashi Khosla School of IT**

12. Financials

(April 1, 2013 - March 31, 2014)

The Institute is financed by the Department of Higher Education, Ministry of Human Resource Development, Government of India. During 2012-2013, the Institute received a grant of Rs. 36,595.00 lakhs from the Ministry of Human Resource Development to meet its yearly expenses. The Institute receives funds for sponsored research projects and for consultancy assignments being undertaken by the Institute from several funding agencies and Industries. The financial year of the Institute corresponds with that of Govt. of India i.e. Ist April to 31st March. The accounts of the Institute are annually audited by the Director General of Audit & Central Revenue of India. The 108th Finance Committee of the Institute (shown in the box on the side) in its meeting held on 20-03-2014 recommended Plan (Normal) Revised Estimates for Rs. 27,300.00 Lakh for the year 2013-2014 and Budget Estimates for Rs. 49,500.00 lakhs for the year 2014-2015 respectively and Non- Plan Revised Estimates for Rs. 27,665.00 lakhs for the year 2013-14 and Budget Estimates for Rs. 31,990.00 for the year 2014-15.

The following are the details for the financial year 2012-2013 and 2013-2014:

FINANCE COMMITTEE

(As on 31.3.2014)

Vijay P. Bhatkar, *Chairman*

R.K. Shevgaonkar

Alok Mishra

Rajesh Singh

R.K. Verma

Ashok Gupta

Rakesh Kumar, *Secretary*

PLAN

Detailed Statement showing the Actual Receipt and Expenditure for 2012-2013 along with Revised Estimates 2013-2014 and Budget Estimates 2014-15

Particulars	Previous Year Actual 2012-2013 *(in Rs Lakhs)*	Revised Estimate 2013-2014 *(in Rs Lakhs)*	Budget Estimates 2014-2015 *(in Rs Lakhs)*
A. Receipt			
Normal Plan Grant from MHRD carryforward	(-) 673.54		
Normal Grant from MHRD (Normal)	17,600.00	27,300.00	49,500.00
Total A	**16,926.46**	**27,300.00**	**49,500.00**
B. Expenditure			
Normal Development Activities & Increase of Students Intake (including new hostel)New Courses Modernisation & Thrust Areas			
(i) Non-Recurring	13,077.26	24,600.00	46,500.00
(ii) Recurring	2,689.18	2,700.00	3,000.00
Commitments against L.C.'s for the year 2012-2013	1,160.02		
Plan (Normal)	--	--	--
Total B	**16,926.46**	**27,300.00**	**49,500.00**

PLAN

Budget Estimates 2014-2015

Head of Expenditure	Actual 2012-2013 *(in Rs Lakhs)*	Revised Estimate 2013-2014 *(in Rs Lakhs)*	Budget Estimates 2014-2015 *(in Rs Lakhs)*
A. Developmental Activities & Increased Intake of Students (Normal)			
Major Works (including On going, Fresh Schemes)	8,524.19	16,200.00	36,000.00
Repair & Maintenance on Buildings	396.26	600.00	1,000.00
Teaching Equipment/Computerisation	3,035.33	6,000.00	5,000.00
Office General & Hospital Equipment/Furniture	193.93	300.00	2,300.00
Research Funds, Central Facilities & Thrust Areas	-	300.00	500.00
Motor Vehicals	19.66	-	-
Library Books & Journals	875.20	1,000.00	1,500.00
Web Based Academic Systems	32.69	200.00	200.00
Institute Scholarships	2,689.18	2,700.00	2,800.00
Centres of Excellence	-	-	200.00
Total	**15,766.44**	**27,300.00**	**49,500.00**

NON-PLAN

Detailed Statement showing the Actual Expenditure for 2012-2013 alongwith Revised Estimates 2013-2014 and Budget Estimates 2014-2015

Head of Expenditure	Actual 2012-2013 *(in Rs Lakhs)*	Revised Estimate 2013-2014 *(in Rs Lakhs)*	Budget Estimates 2014-2015 *(in Rs Lakhs)*
Institute Income	6,277.02	6,182.00	6,607.00
Grant from M.H.R.D.	18,995.00	21,483.00	25,383.00
Total	**25,272.02**	**27,665.00**	**31,990.00**

NON-PLAN

Detailed Statement showing the Actual Expenditure for 2012-2013 alongwith Revised Estimates 2013-2014 and Budget Estimates 2014-2015

Head of Expenditure	Previous Year Actual 2012-2013 *(in Rs Lakhs)*	Revised Estimate 2013-2014 *(in Rs Lakhs)*	Budget Estimates 2014-2015 *(in Rs Lakhs)*
A. Pay & Allowances	12,434.51	14,465.00	17,020.00
B. Pension & Pensionary Benefits	4,493.07	5,480.00	6,000.00
C. Academic Expenses	951.57	1,100.00	1,300.00
D. Educational Expenses	664.77	700.00	700.00
E. Estate Maintenance	4,237.15	4,500.00	5,400.00
F. Office Contingencies, Misc. & Commitments/ Provisions	1,410.54	1,420.00	1,570.00
Total	**24,191.61**	**27,665.00**	**31,990.00**

INCOME

Detail Statement showing the Actual Income for 2012-2013 alongwith Revised Estimate 2013-2014 and Budget Estimates 2014-2015

Sources of Income	Previous Year Actual 2012-2013 *(in Rs Lakhs)*	Revised Estimates 2013-2014 *(in Rs Lakhs)*	Budget Estimates 2014-2015 *(in Rs Lakhs)*
Academic Receipts	2,444.67	2,700.00	3,000.00
Receipt-Central Administration			
Interest on Investments	1,048.99	750.00	750.00
Charges for use of Staff Cars and Buses	5.57	6.00	6.00
Application Fee (Academic Receipt)	64.39	70.00	70.00
Sponsored Project/Consultancy	282.93	300.00	350.00
Works & Building			
Licence Fee	187.62	200.00	200.00
Seat Rent	195.08	200.00	200.00
Water & Electricity	281.34	300.00	300.00
Hospital & Medical	0.30	1.00	1.00
Guest House	251.13	275.00	300.00
Joint Entrance Exam	233.73	250.00	300.00
GATE	1,104.82	1,000.00	1,000.00
Joint Admission Test for M.Sc.	75.12	30.00	30.00
Misc./ Other Receipts (including sale of obsolete equipments)	101.33	100.00	100.00
Total	**6,277.02**	**6,182.00**	**6,607.00**

INTERNAL AUDIT

Internal Auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operation. Internal Audit Section is functioning independently as per Revised Audit System (w.e.f.1/12/2011) directly under the control of the Director, supported by Assistant Registrar (Audit). The section conducts the Internal Audit of the Departments/Centres/Sections etc. within the Institute Internal Control System. The Internal Audit Section also renders advise on various financial as well as administrative/service matters as per needs of the Institute. Out of 64 auditable units 33 units were internally audited during the financial year 2013-14.

Appendix I

SENATE

(As on 31.3.2014)

R.K. Shevgaonkar, Chairman (Director)	N. Chatterjee	S.K. Gupta (CS&E)	Ajit Kumar
A.K. Agarwala	Ratnamala Chatterjee (Ms.)	M. Hanmandlu	Arun Kumar (Phy.)
Ashwini K. Agarwal	Tapan Kumar Chaudhuri	S. E. Hasnain	Arun Kumar (CARE)
G.P. Agarwal	Santanu Chaudhury	S.M. Ishtiaque	N.D. Kurur
V.K. Agarwal	Sujeet Chaudhary	K.C. Iyer	Alok Madan
R. Algirusamy	Veena Chaudhary (Ms.)	A.K. Jain	Puneet Mahajan
Sneh Anand (Ms.)	Anoop Chawla	B.N. Jain	Ranjan Kumar Mallik
Anshul Kumar	H.M. Chawla	N.K. Jain	Manju Mohan (Ms.)
Amit Kumar	Apurba Das	P.K. Jain	Ratan Mohan
S.K. Atreya	L.M. Das	S.K. Jain	B.R. Mehta
Babu J. Alappat	R.P. Dahiya	Sanjeev Jain	D.S. Mehta
R. Bahl	S.K. Dash	V.K. Jain	S.N. Maiti
M. Balakrishnan	M.G. Dastidar (Ms.)	Manjeet Jassal (Ms.)	Shashi Mathur
D.K. Bandhopadhyay	Manoj Datta	Mangla Joshi (Ms.)	Maithili Sharan
S. Banerjee	S. Dharmaraja	Jayadeva	Prashant Mishra
Kanika T. Bhal (Ms.)	J.K. Dutt	B. Jayaram	Saroj Mishra (Ms.)
Ananjan Basu	Viresh Dutta	M. Jagadesh Kumar	Sukumar Mishra
S. Basu	S.G. Deshmukh	Joby Joseph	A.K. Mittal
B.K. Behera	Anupam Dewan	S.D. Joshi	Aditya Mittal
A.N. Bhaskarwar	Chinmoy Sarkar Dey	S.R. Kale	U.C. Mohanti
B. Bhattacharjee	Anil Jacob Elias	N.C. Kalra	Sudipto Mukherjee
R.K.P. Bhatt	O.P. Gandhi	Prem Kumar Kalra	S.N. Naik
Bhim Singh	A. Ganguly	Santosh Kapuria	R.B. Nair (Ms.)
Naresh Bhatnagar	A.K. Ganguli	T.C. Kandpal	Sunil Nath
T.S. Bhatti	N.K. Garg	Ravinder Kaur (Ms.)	A.K. Nema
B. Bhowmik (Ms.)	Naveen Garg	I.N. Kar	B.P. Pal
G. Bhuvaneswari (Ms.)	Anup K. Ghosh	Subrat Kar	B.S. Panda
Jayashree Bijwe (Ms.)	James Gomes	S.C. Kaushik	Preeti Ranjan Panda
P.R. Bijwe	Pramila Goyal (Ms.)	Saroj Kaushik (Ms.)	P.S. Pandey
V.S. Bisaria	A.K. Gosain	A.K. Keshari	Sunil Pandey (on lien)
Ranjan Bose	Ashok Gupta	Rajesh Khanna	Siddharth Pandey
Bijoy H. Boruah	B.D. Gupta	Mukesh Khare	D.K. Pandya
Devi Chadha (Ms.)	Bhuvnesh Gupta	Neeraj Khare	K.K. Pant
Charusita Chakravarty (Ms.)	Deepti Gupta (Ms.)	S.K. Khare	Nalin Pant
Chandra B. (Ms.)	H.C. Gupta	Sangeeta Kohli (Ms.)	B.S. Panwar
Chandra Shakher	K. Gupta	V.K. Kothari	Shankar Prakriya
B.R. Chahar	S.K. Gupta (Ch.E.)	S.K. Koul	Sudhir Chandra
V. Chandra	M.N. Gupta	S. Kundu	Rajendra Prasad
Sanjiva Prasad	M.P. Gupta	Veena Koul (Ms.)	Rajesh Prasad
Surendra Prasad	Ambuj D. Sagar	R.K. Sharma	Sushil

contd. ...

K.R. Rajagopal	Sanjeev Sanghi	R.P. Sharma	N. Tandon
R. Chattopadhyay	Huzur Saran	S. Arun Kumar	R.N. Ram
A. Ramanan	V.R. Gunturi	Satyawati Sharma (Ms.)	G.N. Tiwari
N.G. Ramesh	Anil Kumar Saroha	M.R. Shenoy	Geetam Tiwari (Ms.)
A.D. Rao	Santosh Satya (Ms.)	A.K. Singh	K. Thyagarajan
K.S. Rao	Anil Sawhney	Harpal Singh	C.A. Tomy
P.V. Rao	Kushal Sen	Jai Deo Singh	V.K. Tripathi
Alok Ray	Sandeep Sen	Purnima Singh (Ms.)	Suneet Tuli
Anurag Singh Rathore	P. Senthikumaran	S.N. Singh	V. Upadhyay
M.R. Ravi	Kiran Seth	S.P. Singh	M. Veerachary
Ravi Kumar D.	D.T. Shahani	T.R. Sreekrishnan	S.V. Veeravalli
Anjan Ray	Jagdish T. Shahu	A.K. Srivastava	V.K. Vijay
Rengasamy R.S.	Ravi Shankar (Chy.)	Pankaj Srivastava	G.S. Visweswaran
G.B. Reddy	Ravi Shankar (DMS)	Amrit Srinivasan (Ms.)	A.L. Vyas
Shantanu Roy	Anurag Sharma	P.M.V. Subba Rao	S.S. Yadav
P.K. Roychoudhury	D.K. Sharma	P.V. Madhusudan Rao	Rakesh Kumar (Secretary)
Subir Kumar Saha	K.G. Sharma	R.K. Soni	
Sanil V.	O.P. Sharma	Suhail Ahmad	

EXECUTIVE COMMITTEE OF THE SENATE (ECS)

(As on 31.3.2014)

R.K. Shevgaonkar, Chairman	B.S. Panda
S.K. Koul	S.R. Kale
S.N. Singh	K. Thyagarajan
Anurag Sharma	R. Chattopadhyay
Sushil	Arun Kumar
Suneet Tuli	(Ms.) Sneh Anand
Mukesh Khare	Sanjeev Sanghi
S.K. Gupta	S. Arun Kumar
Ashok Gupta	R.P. Sharma
Suhail Ahmad	O.P. Gandhi
T.R. Sreekrishnan	A.D. Rao
S. Basu	D.T. Shahani
A. Ramanan	(Ms.) Veena Choudhury
A.K. Jain	(Ms.) Satyawati Sharma
Huzur Saran	(Ms.) Sangeeta Kohli
(Ms.) Basabi Bhaumik	Naresh Bhatnagar
Sanil V.	B.D. Gupta
(Ms.) Kanika T. Bhal	Rakesh Kumar, Registrar, Member Secretary

Appendix II

ADMINISTRATIVE AND OTHER STAFF

(As on 31.3.2014)

Administration	
Rakesh Kumar	Registrar (on deputation)
M.K. Gulati	Deputy Registrar (Accounts)
P. G. Basak	Deputy Registrar (E-I)
Nanak Chand Chauhan	Deputy Registrar (RTI Cell, Estate office & Legal Cell)
K.K. Bhattacharjee	Deputy Registrar (SP Section & R&I)
Vivek Raman	Deputy Registrar (PGS)
Atul Vyas	Deputy Registrar (AA&IP and Director's Office)
Umesh Korade	Deputy Registrar (o/o DD (o))
N. Bhaskar	Assistant Registrar (CDN, Plng, Pub and Transport)
R.K. Gupta	Assistant Registrar (Audit)
V.K. Vashistha	Assistant Registrar (IRD)
Anup Kuksal	Assistant Registrar (IRD A/c)
Ram Parsad	Assistant Registrar (SAS)
Alan V. Siante	Assistant Registrar (UGS)
Mohd. Shamim	Assistant Registrar (Accounts)
Raj Kumar Gupta	Assistant Registrar (Accounts)
Mukesh Chand	Assistant Registrar (Accounts)
Ramesh Kumar Thareja	Assistant Registrar (E-II & Manpower Training)
V.U. Jayendran	Assistant Registrar (Hostel & Main A/c)
B.N. Yadav	Security Officer (SS)
G.K. Taneja	Executive Engineer & Offtg. Institute Engineer
K.M. Vijay Kumar	Executive Engineer
Anuj Gaur	Executive Engineer
Sanjiv Kumar	Executive Engineer (on deputation)
Rafat Jamal	Assistant Executive Engineer
V. K. Bharaj	Assistant Executive Engineer
Hitendra Govil	Assistant Executive Engineer
K.P. Mishra	Assistant Executive Engineer
S. Mohan	Assistant Executive Engineer
Prem Kumar	Assistant Executive Engineer
Brahm Prakash	Assistant Executive Engineer
Ashok Kumar	Assistant Executive Engineer
Raju Ram Parihar	Assistant Executive Engineer
Vishal	Assistant Executive Engineer
Pradip Karmarkar	Assistant Executive Engineer
Anishya Obhrai Madan (Ms.)	Industrial Liaison Officer
Deepak Negi	Sports Officer

contd. ...

Administrative Computerisation Support Service	
S. Arun Kumar	Head
R. Raghavan (Ms.)	Senior System Programmer
K. Narayanan	Senior System Programmer
P.K. Baboo	Senior System Programmer
Pardeep Kumar Gupta	Senior System Programmer
Student Counselling Service	
Saroj Kaushik	Head
Rupa Murghai	Counsellor
Professors-in-Charge of Different Sections	
Sudipto Mukherjee	Professor-in-Charge (Planning)
Naresh Bhatnagar	Professor-in-Charge (Transport)
O.P. Sharma	Professor-in-Charge (Guest Houses)
Kushal Sen	Professor-in-Charge (Training & Placement)
Hindi Cell	
Santosh Satya	Head
Library	
B.D. Gupta	Chairman
J. P. Srivastava	Dy. Librarian
Nabi Hasan	Dy. Librarian
IIT Hospital	
Lily Khosa (Ms.)	Head Hospital Services
S.K. Aggarwal	Chief Medical Officer (SS)
Renu Misuriya (Ms.)	Medical Officer (SS)
Ajay Kumar Jain	Medical Officer (SS)
Mahesh Kumar Sagar	Medical Officer (SS)
Anila Khosla (Ms.)	Medical Officer (SS)
P. K. Rajesh	Medical Officer (Homeo)
Md. Ashafaque Hussain	Medical Officer
Sayed Yasmeen Raunaq	Medical Officer
L. Pangerlemba	Medical Officer

Appendix III

OTHER COMMITTEES

(As on 31.3.2014)

BUILDING AND WORKS COMMITTEE

R.K. Shevgaonkar, Chairman (Director)	K.J. Singh
S. Ramanujam	G.K. Taneja
Jose Kurian	Ashok Gupta
M.N. Joglekar	Rakesh Kumar, Secretary
K.N. Rai	

ADVISORY COMMITTEE FOR LIBRARY

B.D. Gupta, Chairman	Veena Koul
Anupam Dewan	V. Krishna
Preeti Srivastava	J. Bijwe
Ali Haider	Mahesh P. Abegaonkar
A.K. Ganguli	R. Raghavan
G.V. Ramana	Santosh Satya (Ms.)
Huzur Saran	S.N. Maiti
Jayadeva	S.K. Atreya
Debasis Mondal	Rajesh Prasad
Jitendra Madaan	S.P. Singh
Aparna Mehra (Ms.)	Parnil Singh (Ms.)
S.P. Singh	Ekansh Gupta
Joby Joseph	Shashank Kedia
Mangala Joshi (Ms.)	Amit Kashyap
Vimlesh Pant	Narender Kumar, Member Secretary

COMPUTER USERS' COMMITTEE

S. Arun Kumar, Chairman	Sneh Anand (Ms.)
Sanjeev Sanghi	R.P. Sharma
A.K. Srivastava	R.K. Rai
Gaurav Goel	R. Bahl
Nalin Pant	Veena Choudhary (Ms.)
Vasant Matsagar	A.K. Agarwala
Maya Ramanath	V.M. Chariar
Kushal Shah	Gopal Krishan
Debasis Mondal	Savita Goel (Ms.)
S.P. Singh	Arushi Jamaiyar (Ms.)
Mani Mehra (Ms.)	Arun Singh
N. Bhatnagar	Siddhant Malviya
G.V. Prakash	Madhur Gupta
R.S. Rengasamy	Saroj Kaushik
Vimlesh Pant	Pragya Jain (Ms.) , Member-Secretary