

## INTERDISCIPLINARY RESEARCH PROGRAMME IN TRANSPORTATION RESEARCH AND INJURY PREVENTION (TRIPP)

TRIPP is an interdisciplinary programme focussing on the reduction of adverse health effects of road transport. TRIPP attempts to integrate all issues concerned with transportation in order to promote safety, cleaner air, and energy conservation. The Programme is recognized as a Centre of Excellence by the Ministry of Urban Development, Govt. of India. It is recognized as a WHO Collaborating Centre for research and training in safety technology. It is also recognized as a Centre of Excellence for Research on Future Urban Transport by the Volvo Research Foundation.

The programme has associated faculty from different departments/centres of the institute, viz., Applied Mechanics, Biomedical Engineering, Civil Engineering, Computer Science and Engineering, Mechanical Engineering, Humanities and Social Sciences, Mathematics. Experts from other organizations and hospitals in Delhi are also associated with TRIPP. TRIPP organises short-term courses and workshops on road safety and transport regularly every year.

**The TRIPP research areas are:** Transportation planning and traffic flow analysis for optimising mobility and minimising accidents and pollution; Vehicle crash modelling, road safety studies, safer vehicle and helmet design; Studies related to public transport, traffic management, road design and land use planning; Epidemiology of factors associated with road traffic injuries, injury analysis and pre hospital care; Studies on vehicle technology and engines to minimise fuel consumption and pollution. TRIPP also organises short-term courses and workshops on road safety and transport issues regularly.

## ASSOCIATED FACULTY MEMBERS

Prof. Geetam Tiwari, Civil Engineering, -- Coordinator  
 Prof. Puneet Mahajan, Applied Mechanics  
 Prof. Sanjeev Sanghi, Applied Mechanics  
 Prof. A. R. Ray, CBME  
 Prof. A. K. Gosain, Civil Engineering  
 Dr. Gazala Habib, Civil Engineering  
 Dr. K. N. Jha, Civil Engineering  
 Dr. R. R. Kalaga, Civil Engineering

Prof. S. Banerjee, Computer Science and Engineering  
 Prof. Anoop Chawla, Mechanical Engineering  
 Dr. Nomesh Bolia, Mechanical Engineering  
 Prof. S. R. Kale, Mechanical Engineering,  
 Prof. Sudipto Mukherjee, Mechanical Engineering  
 Dr. Vipul Jain, Mechanical Engineering  
 Dr. N. Chatterjee, Mathematics  
 Prof. Ambuj Sagar, Humanities and Social Sciences  
 Prof. V. Upadhyay, Humanities and Social Sciences

## OPTO-ELECTRONICS AND OPTICAL COMMUNICATION RESEARCH PROGRAMME

The programme is focused for research in the field of Fibre Optics and Optical Communication. Main participating departments/centres are Physics, Electrical Engineering, IDDC and CARE. This programme has received fundings from the Government agencies like MHRD, DST, DIT (formerly DoE), and DoT. In addition, R&D work has also attracted considerable international collaboration from universities in UK, France and National Institute of Standards and Technology in USA. The development work has led to commercialisation of a fibre optic educational kit and an erbium doped fiber amplifier.

**The programme carries research in the following areas:** analytical and numerical modelling of the propagation characteristics of optical fibres and integrated optical waveguides, design and simulation of novel in-line fibre optic components such as polarizers, directional couplers, and mode filters, characterisation of birefringent fibres, development of optical fibre-based sensors, nonlinear interactions in fibre and integrated optical waveguides, Optical Amplifier, Coherent optical communication, Optical Networks, QoS issues of WDM Networks, SONET / SDH, fiber in Access Networks, Erbium Doped Fibre Amplifiers (EDFA), Raman Fiber Amplifiers, Dispersion Compensating Fibres (DCF), Fibre Bragg Gratings (FBG), fibre optic sensors for civil engineering structures, photonic band gap fibres, free space optical systems, OCDMA systems, etc.

## INTERDISCIPLINARY M.DES/M.TECH. PROGRAMMES

Besides a number of regular courses that are offered at the postgraduate level by the academic departments/ centres, the Institute offers Interdisciplinary M.Tech. and one M.Des. programme which are managed by the Programme Executive Committees and Programme Advisory Committees that are constituted by nominating faculty from the concerned departments and centres. Each programme is looked after by the Programme Coordinator who is appointed by the Director.

### MASTERS OF DESIGN PROGRAMME

The M. Des. programme caters to the requirement of industry for innovators and designers capable of creating high quality design of products for competitive markets. It is open only to graduates in Engineering and Architecture. The programme is of two years duration, and admission to the programme is through CEED. It involves extensive studio work with hands on practice and is a project based, industry and consumer oriented programme. The thesis projects are often supported by the industry and there is close interface with the industry throughout the programme of study. The programme emphasizes development of free hand conceptualization skills, CAD modeling skills on mid level platforms and above all design thinking skills and detailing over a diverse range of products.

### INTERDISCIPLINARY M.TECH. PROGRAMMES

The institute recognises and actively supports academic activities jointly conducted by faculty across the departments and centres. Such activities encourage teaching, research and industry/professional interactions, these are listed below. The Interdisciplinary Post Graduate programmes are in the following specializations:

**Computer Applications:** The programme is offered jointly by the faculty of three departments, viz., mathematics, computer science and engineering, and electrical engineering. Faculty from department of applied mechanics, mechanical engineering and CARE and CAS also participate. The curriculum includes courses on data structure, computer optimization, numerical simulation, DBMS, and scientific software amongst others

**Energy Studies:** This programme introduces students from different backgrounds to various aspects of energy, sources, fuels, energy conversion and energy systems amongst others. Commercial and non-commercial energy sources are covered.

**Industrial Tribology and Maintenance Engineering:** Various basic and applied aspects of tribology, including wear and maintenance engineering are covered in this programme. Students are introduced to diagnostic maintenance, reliability, availability and maintainability engineering as well as failure analysis.

**Instrument Technology:** This programme includes students to various instruments, electronic techniques for signal conditioning and instrument design. The electives cover a wide range of topics in instrumentation, electrical engineering, mechanical engineering and physics.

**Opto-Electronics and Optical Communication:** This programme is jointly offered by physics and electrical engineering departments. The courses cover a wide variety of basic and applied courses in fibre optics, optical-electronics and digital communication.

**Polymer Science and Technology:** Faculty from centre for polymer science and technology, and textile, mechanical engineering and chemical engineering are participants in this programme. The focus is on polymer chemistry, physics, processing, and engineering applications.

**VLSI Design Tools and Technology:** This programme is taught by the faculty of computer science and engineering, electrical engineering departments and CARE. The coursework includes courses on MOS, VLSI and VLSI design and VLSI system. The students gain proficiency in the use of state-of-art tools in VLSI design. The programme is largely supported by industries engaged in VLSI design.

**Telecommunication Technology for Management:** A set of courses in digital communication and systems, wireless communication and telecommunication management form the core of this programme. Faculty of electrical engineering and management studies departments participate in the teaching of this programme.

**Interdisciplinary part time M. Tech.(evening) programme in energy and environmental management:** This programme is offered to professionals in industry and government and it covers courses in conventional and non-conventional sources of energy and their environmental impact. The classes are conducted in the evenings.

## 7. MAJOR CENTRAL FACILITIES

The Institute has following central facilities for smooth functioning of Academics, Research and Outreach.

- Industrial research and development (unit)
- Central workshop
- Training and placement (unit)
- Institute libraries
- Other Facilities

### 7.1 INDUSTRIAL RESEARCH AND DEVELOPMENT (UNIT)

The Indian Institute of Technology Delhi lays a strong emphasis on the sponsored research and Industrial interaction. The Industrial Research & Development (IRD) Unit was specifically set up in the institute to provide specialized administrative and managerial support for the operation of Sponsored Research Projects, Consultancy jobs and other related research and development activities. Over the years, the Institute has set up many modern laboratories and supporting infrastructure through these projects.

The Institute has given due emphasis to jobs of varied nature like trouble shooting, product and process development, design checks and investigation of problems of direct relevance to the needs of the country through time-bound Sponsored Research Projects and Consultancy Projects. During April 1, 2013 to March 31, 2014, 150 new sponsored research projects with a funding of Rs. 68.65 crores were undertaken. In addition, 430 consultancy jobs worth Rs. 27.31 crores were also undertaken.

The Institute is actively involved in collaborative programmes with national and international organization/ universities and this unit manages these projects.

IRD has several schemes to encourage research and development among students:

- Summer Undergraduate Research Award (SURA)
- One-time grant of Rupees One Lac to New faculty members who join the Institute
- Assistantships/Fellowships to 5th year Ph.D. Students
- Travel grant under “Research Scholar Travel Award” (RSTA)
- Open House
- Chair Professorships

### 7.2 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.

### 7.3 TRAINING AND PLACEMENT UNIT

The Training and Placement unit actively interacts with industrial, management and research organisations in the country with the dual aim of ensuring that the students are given adequate technical exposure / industrial training during their pre-final year and subsequently enabling them to get employment in organisations.

### Training

Pre-final year students of B.Tech., Dual Degree, and Integrated Programmes, having minimum of 90 earned credits at the end of 5th semester, are required to undergo 50 working days' mandatory practical training during summer vacations following the 6th semester in partial fulfilment of their degree requirements. The Training and Placement unit facilitates the placement of students in Industry and Research Laboratories for this purpose.

### Placement

An active and dynamic programme of securing jobs for students graduating from the Institute is initiated by inviting industries of repute and other organisations to conduct interviews. Wide publicity of the academic and extra-curricular activities is given to the organisations.

Organisations that have hitherto neither trained nor placed our students are contacted actively.

### Support Services

The Training and Placement unit organizes lectures for students to supplement the above information and special talks. workshops are organized on various subjects such as: career counselling, interview techniques and modes of communication. The unit remains in touch with the Alumni Association of IIT Delhi to obtain their valuable advice and guidance for the students.

## 7.4 INSTITUTE LIBRARIES

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

### 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.

### 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.

### Reference Collection

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



### 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 backfiles 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).

## E-RESOURCES AVAILBLE 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

## 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

## 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)
- Mylibrary
- 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.

## 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.

## RFID IMPLEMENTATION IN THE LIBRARY

The Library also has the Radio Frequency 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.

### 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

### 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.

### Circulation of Books and Library Membership

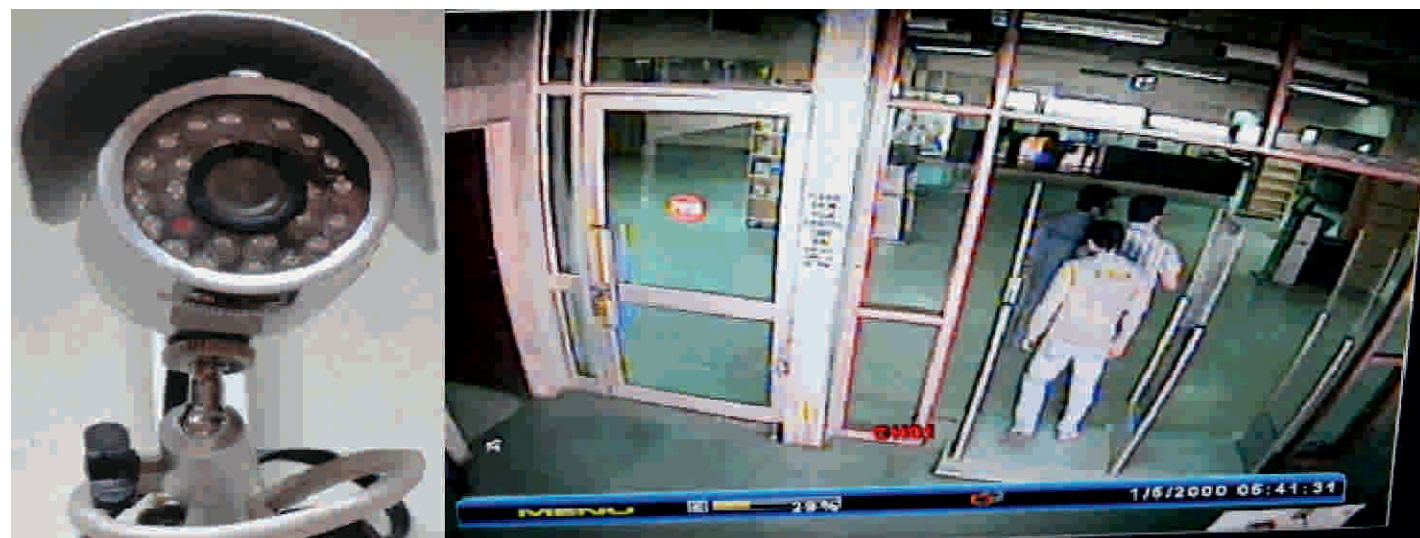
The Library members, according to their borrowing category can borrow stipulated number of books at a time against their bar-coded patron card. During the period under report, about 60,000 volumes were borrowed by the members of the Library from general collection.

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.

### 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 Associate Members)	153



Video Surveillance integrated with the RFID based library system

### 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 increasing 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.

### Photocopying Facility

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

### 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.

### 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>

### 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](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:

### 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/>

### 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.

## 7.5 OTHER FACILITIES

The following Central Facilities are available to the institute community. Services are available on payment basis and are available to all faculty and students as well as for outside individuals and organizations.

### Facility

Glass Blowing Workshop	NMR	SAM/ESCA
TEM	SEM	ICPE Spectroscopic
GC/MS	Mechanical Fabrication	Liquid Nitrogen Facility



## ADMINISTRATIVE STRUCTURE

### THE VISITOR

**Shri Pranab Mukherjee** (Hon'ble President of India)

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### DIRECTOR

**Prof. R.K. Shevgaonkar**

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**Prof. S.N. Singh (Operations) and Prof. S.K. Koul (Strategy and Planning)**

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**Prof. S.G. Deshmukh** : Faculty  
**Prof. Suneet Tuli** : Research and Development  
**Prof. Mukesh Khare** : Alumni Affairs & Intl. Programmes  
**Prof. S.K. Gupta** : Student Affairs  
**Prof. K.S. Rao** : Infrastructure

#### Associate Deans

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**Prof. T.C. Kandpal** : PG Research  
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**Prof. P.M.V. Subba Rao** : Hostel Management  
**Prof. (Ms.) Manju Mohan** : Student Welfare  
**Prof. Neeraj Kumar Jha** : Infrastructure  
**Prof. B.K. Panigrahi** : Infrastructure

### REGISTRAR

**Dr. Rakesh Kumar**

## THE SENATE

### R.K. Shevgaonkar, Chairman

(Director)

### Deputy Directors

S.N. Singh

S.K. Koul

### All Professors (or equivalent)

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V.K. Agarwal

A.K. Agarwala

Ashwini K. Agarwal

Suhail Ahmad

Babu J. Alappat

R. Algirusamy

Sneh Anand (Ms.)

S.K. Atreya

Anshul Kumar

R. Bahl

M. Balakrishnan

D.K. Bandhopadhyay

S. Banerjee

B.K. Behera

Bijoy H. Boruah

Ananjan Basu

S. Basu

Kanika T. Bhal (Ms.)

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Apurba Das

Manoj Datta

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Viresh Dutta

S.G. Deshmukh

Anupam Dewan

Chinmoy Sarkar Dey

J.K. Dutt

Anil Jacob Elias

Naveen Garg

O.P. Gandhi

A. Ganguly

A.K. Ganguli

Anup K. Ghosh

N.K. Garg

Pramila Goyal (Ms.)

James Gomes

A.K. Gosain

V.R. Gunturi

Ashok Gupta

B.D. Gupta

Bhuvnesh Gupta

Deepti Gupta (Ms.)

K. Gupta

M.P. Gupta

S.K. Gupta (CS&E)

S.K. Gupta (Ch.E.)

Sayed E. Hasnain

S.M. Ishtiaque

K.C. Iyer

A.K. Jain

P.K. Jain

S.K. Jain

Sanjeev Jain

V.K. Jain

Manjeet Jassal (Ms.)

B. Jayaram

Jayadeva

M. Jagadesh Kumar

Mangla Joshi (Ms.)

S.D. Joshi

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N.C. Kalra  
Prem Kumar Kalra  
Tara C. Kandpal  
Santosh Kapuria  
I.N. Kar  
Subrat Kar  
Ravinder Kaur (Ms.)  
S.C. Kaushik  
Saroj Kaushik (Ms.)  
A.K. Keshari  
Rajesh Khanna  
Mukesh Khare  
S.K. Khare  
Neeraj Khare  
Veena Koul (Ms.)  
Sangeeta Kohli (Ms.)  
S. Kundu  
Ajit Kumar  
Amit Kumar  
Arun Kumar (Phy.)  
Arun Kumar (CARE)  
S. Arun Kumar (CS&E)  
N.D. Kurur  
Manju Mohan (Ms.)  
Alok Madan  
Ranjan Kumar Mallik  
B.R. Mehta  
D.S. Mehta  
S.N. Maiti

Shashi Mathur  
Maithili Sharan  
Saroj Mishra (Ms)  
Sukumar Mishra  
Prashant Mishra  
A.K. Mittal  
Aditya Mittal  
Sudipto Mukherjee  
Ratan Mohan  
Sanjiva Prasad  
R.B. Nair (Ms)  
S.N. Naik  
Arvind K. Nema  
Sunil Nath  
B.S. Panda  
Preeti Ranjan Panda  
P.S. Pandey  
Sunil Pandey (on lien)  
Siddharth Pandey  
K.K. Pant  
Nalin Pant  
B.S. Panwar  
Shankar Prakriya  
Rajesh Prasad  
K.R. Rajagopal  
A. Ramanan  
N.G. Ramesh  
A.D. Rao  
K.S. Rao  
P.M.V. Subba Rao

P. Venkateswara Rao  
P.V. Madhusudan Rao  
S.C.S. Rao  
Anurag Singh Rathore  
M.R. Ravi  
Anjan Ray  
G.B. Reddy  
R.S. Rengasamy  
P.K. Roychoudhury  
Shantanu Roy  
Subir Kumar Saha  
Ambuj D. Sagar  
Sanjeev Sanghi  
Sanil V.  
Huzur Saran  
Anil Kumar Saroha  
Santosh Satya (Ms.)  
Kushal Sen  
P. Senthikumaran  
Jagdish T. Sahu  
Puneet Mahajan  
Sandeep Sen  
Ravi Shankar (Chy.)  
Ravi Shankar (DMS)  
D.T. Shahani  
Jagdish T. Shahu  
Anurag Sharma  
D.K. Sharma  
K.G. Sharma  
R.P. Sharma  
R.K. Sharma

Satyawati Sharma (Ms.)  
M.R. Shenoy  
Bhim Singh  
A.K. Singh  
Harpal Singh  
Jai Deo Singh  
Purnima Singh (Ms.)  
S.P. Singh  
R.K. Soni  
A.K. Srivastava  
Pankaj Srivastava  
T.R. Sreekrishnan  
Sushil  
N. Tandon  
G.N. Tiwari  
Geetam Tiwari (Ms.)  
K. Thyagarajan  
Amitabha Tripathi  
Suneet Tuli  
C.A. Tomy  
V. Upadhyay  
M. Veerachary  
S.V. Veeravalli  
V.K. Vijay  
G.S. Visweswaran  
S.S. Yadav

## THE SENATE (contd.)

**Three Educationists from Outside IIT Delhi**  
Chandrima Shaha  
Raj Senani  
Jayati Ghosh

**Head, Central Library**  
Narender Kumar (Librarian)

**Head, Central Workshop**  
P.V. Madhusudan Rao

**One of the Wardens**  
Seema Sharma (Ms.)

**Chairman, Grade & Registration (UG&PG)**  
D. Ravi Kumar

**Chairman, Time Table Committee**  
Joby Joseph

**Six Members of Faculty**  
M.K. Singha  
Munawar Shaik  
Rakesh Khosa  
B.K. Panigrahi  
Sagnik Dey  
Kolin Paul

**Three Alumni Representatives**  
Pravin Puran  
Ashok Kumar  
Malti Goel (Ms.)

**Four Student Representatives**  
Maheep Singh  
Ravi S. Sudhakar  
Isha Rani Gupta (Ms.)  
Vedant Saboo

**Registrar**  
Rakesh Kumar  
(Secretary)

## CHAIRMEN OF THE BOARDS

<b>R.K. Shevgaonkar</b>	Board of Educational Research and Planning, Executive Committee of the Senate, Student Affairs Council
<b>Suneet Tuli</b>	Industrial Research and Development Board
<b>Anurag Sharma</b>	Board for Academic Programmes

## PRESIDENTS OF BOARDS FOR STUDENT ACTIVITIES

<b>S.K. Khare</b>	Board for Students Publications
<b>Deepthi Gupta (Ms.)</b>	Board of Recreational and Creative Activities
<b>S.K. Gupta</b> Dean of Students (ex-officio)	Board of Hostel Management
<b>Manju Mohan (Ms.)</b> (Vice Chairman)	Student Teacher Interaction Committee
<b>Anil Saroha</b> (President)	Board for Sports Activities
<b>Saroj Kaushik (Ms.)</b> (President)	Board for Students Welfare

## LIBRARY

<b>B.D. Gupta</b> (Library)	Professor-in-Charge
<b>Librarian</b>	Narender Kumar
<b>Deputy Librarian</b>	J.P. Srivastava Nabi Hasan Neeraj Kumar Chaurasia

## OTHERS

<b>A.K. Saroha</b>	Advisor, Foreign Students
<b>P.R. Bijwe</b>	Advisor, SC/ST Students
<b>Rajesh Prasad</b>	Coordinator, NSS
<b>Brijesh Lall</b>	Coordinator, NCC
<b>R.K. Varshney</b>	SC/ST Preparatory Course

## CHAIRMEN OF ACADEMIC ACTIVITIES

<b>S. Arun Kumar</b> Head, CSC (ex-officio)	Computer User's Committee
<b>Kushal Sen</b>	JEE Chairman (Advanced-2013)
<b>B.D.Gupta</b>	Advisory Committee for Library (ACL)
<b>K.S. Rao</b>	Chairman (GATE/JAM)
<b>Manju Mohan (Ms.)</b> President BSW	Head, Counselling Service (Ex-officio)
<b>Santosh Satya(Ms.)</b>	Hindi Cell (Head)
<b>D. Ravi Kumar</b>	Grade & Registration (UG) & (PG)
<b>Joby Joseph</b>	Time Table Committee

## COORDINATORS OF INTERDISCIPLINARY PROGRAMMES

### M.Tech. Programmes

N. Tandon	Industrial Tribology & Maintenance Engineering
Veena Chaudhary (Ms.)	Polymer Science & Technology
K.A. Subramanyan	Energy Studies / Energy & Environment Management
S. Dharmaraja	Computer Applications
Anshul Kumar	VLSI Design, Tools & Technologies
D.T. Shahani	Instrument Technology

### M.Tech. and Research Programmes

V.K. Jain	Opto Electronics & Optical Communications
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### M.Des. Programme

D.T. Shahani	Industrial Design
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### Research Programme

Geetam Tiwari (Ms.)	Transportation Research and Injury Prevention Programme (TRIPP)
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### Others

S.V. Veeravalli	Quality Improvement Programme/ Continuing Education Programme/OCD
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## COORDINATORS OF CENTRAL FACILITIES

(Located in Departments/Centres)

N.D. Kurur	NMR
Sujeet Chaudhary	Liquid Nitrogen
Kushal Sen	SEM
Mukesh Chander	SAM/ESCA
Naresh Bhatnagar	Mechanical Fabrication
P. S. Pandey	Glass Blowing Workshops
G.B. Reddy	TEM
B.R. Mehta	AFM+STM (Atomic Force Microscope+Scanning Tunneling Microscope)
B. Jayaram	Supercomputing facility for Bio-informatics and Computational Biology
P.M. Pandey	Rapid Prototyping
A.K. Mittal	Gas Chromatography-Mass Spectrometry (GC-MS)
Saroj Mishra (Ms.)	MALDI/MS Facility
Vikram Kumar	Nanoscale Research Facility

## CENTRAL WORKSHOP

Professor and Head	P.V. Madhusudan Rao
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## CHAIRMEN OF OTHER COMMITTEES

R.K. Shevgaonkar (Director)	Official Language Implementation Committee
Anurag Sharma	Institute Lecture Series Committee
Anurag Sharma	Standing Committee for Convocation 2014
Anurag Sharma	Kendriya Vidyalaya Mangement Committee
Anurag Sharma	Nursery & K.G. School Advisory Committee
K.S. Rao	Commercial Establishments & Licencing Committee
K.S. Rao	Commercial Establishments Monitoring Committee
K.S. Rao	House Allotment Committee
K.S. Rao	Air-conditioning Committee
A.K. Gosain	Committee for House Building and other Advances
G.B. Reddy	Hospital Advisory Committee
R. Bahl	Employees Welfare Committee
S.N. Maiti	Institute Grievance Committee
S.K. Gupta	Managing Committee for Eating Outlets
S.N. Singh	Security Advisory Committee
S.N. Singh	Managing Committee of the Benevolent Fund Scheme
S.N. Singh	Executive Committee of IITD Staff Welfare Scheme

## WARDENS OF HOSTELS

Pulak Mohan Pande	Kumaon
Abhijeet Majumdar	Nilgiri
B.K. Panigrahi	Aravali
Seema Sharma (Ms.)	Kailash
Ravi P. Singh	Jwalamukhi
Dipayan Das	Shivalik
M.S. Kulkarni	Karakoram
A.K. Nema	Vindhyachal
P.M.V. Subbarao	Nalanda / IP / New Vindhyachal
Sreedevi U. (Ms.)	Himadri
Sudip Pattanayek	Satpura
Saif K. Mohammed	Zanskar
D. Sundar	Girnar
H. Hirani	Udaigiri

## PROFESSOR-IN-CHARGE OF DIFFERENT SECTIONS

Prof.-in-Charge (Planning)	: Sudipto Mukhejree
Prof.-in-Charge (Guest Houses/Halls)	: Tapan K. Chaudhari
Prof.-in-Charge (Training & Placement)	: Shashi Mathur
Prof.-in-Charge (Library)	: B.D. Gupta
Prof.-in-Charge (EHLS Unit)	: H.M. Chawla

## HINDI CELL

Head	Santosh Satya (Ms.)
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## STUDENT COUNSELLING SERVICE

Head	Manju Mohan (Ms.)
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## COUNSELLOR

Rupa Murghai
Rama Raj

## ADMINISTRATIVE COMPUTERISATION SUPPORT SERVICE

Head	S. Arun Kumar
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## CVC

Chief Vigilance Officer	S.S. Yadav
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## RTI

Public Information Officer	N.C. Chauhan
Appellate Authority	Rakesh Kumar, Registrar

## ADMINISTRATION

Rakesh Kumar  
M.K. Gulati  
P. G. Basak  
N.C. Chauhan  
K.K. Bhattacharjee  
Vivek Raman  
Atul Vyas  
Umesh Korade  
N. Bhaskar  
V.K. Vashistha  
Anup Kuksal  
Ram Parsad  
Mohd. Shamim  
Ramesh Kumar Thareja  
Alan V. Sinate  
Mukesh Chand  
Raj Kumar Gupta  
Satish Narayanan Tiwari  
Deb Ranjan Mukherjee  
G.K. Taneja  
K.M. Vijay Kumar  
Anuj Gaur  
Sanjeev Kumar  
Rafat Jamal  
V.K. Bharaj  
Hitendra Govil  
K.P. Mishra  
S. Mohan  
Prem Kumar  
Brahm Prakash  
Ashok Kumar  
Raju Ram Parihar  
Vishal  
Rupa Murghai (Ms.)  
Lily Khosa (Ms)  
Renu Misurya (Ms)  
Ajay Kumar Jain  
Anila Khosla (Ms)  
M.K. Sagar  
PK. Rajesh  
Md. Ashafaque Hussain  
Sayed Yasmeeen Raunaq  
L. Pangerlemba  
B.N. Yadav  
Deepak Negi  
Anishya Madan (Ms.)

Registrar (on deputation)  
Deputy Registrar (Accounts)  
Deputy Registrar (E-I)  
Deputy Registrar (RTI Cell, Estate office & Legal Cell)  
Deputy Registrar (SP Section & R&I)  
Deputy Registrar (PGS)  
Deputy Registrar (AA&IP and Director's Office)  
Deputy Registrar  
Assistant Registrar (SS) (Coordination, Planning, Publication and Transport)  
Assistant Registrar (IRD)  
Assistant Registrar (IRD A/c)  
Assistant Registrar (SAS)  
Assistant Registrar (Audit/Accounts)  
Assistant Registrar (E-II & Manpower Training)  
Assistant Registrar (UGS)  
Assistant Registrar  
Assistant Registrar (Audit/Accounts)  
Assistant Registrar  
Assistant Registrar  
Executive Engineer & Offtg. Institute Engineer  
Executive Engineer  
Executive Engineer  
Executive Engineer (deputation)  
Assistant Executive Engineer  
Assistant Executive Engineer  
Assistant Executive Engineer  
Assistant Executive Engineer  
Assistant Executive Engineer  
Assistant Executive Engineer  
Assistant Executive Engineer  
Assistant Executive Engineer  
Assistant Executive Engineer  
Assistant Executive Engineer  
Assistant Executive Engineer  
Assistant Executive Engineer  
Student Counsellor  
Medical Officer (SS) & Head, Hospital Services  
Medical Officer (SS)  
Medical Officer (SS)  
Medical Officer  
Medical Officer (SS)  
Medical Officer (Homeopathic)  
Medical Officer  
Medical Officer  
Medical Officer  
Medical Officer  
Security Officer (SS)  
Sports Officer  
Industrial Liaison Officer









## INDIAN INSTITUTE OF TECHNOLOGY DELHI THE HONOUR CODE

I ....., Entry No.....

do hereby undertake that as a student at IIT Delhi :

- 1) I will not give or receive aid in examinations; that I will not give or receive unpermitted aid in class work, in preparation of reports, or in any other work that is to be used by the instructor as the basis of grading; and
- 2) I will do my share and take an active part in seeing to it that others as well as myself uphold the spirit and letter of the Honour Code.

I realise that some examples of misconduct which are regarded as being in violation of the Honour Code include :

-  Copying from another's examination paper or allowing another to copy from one's own paper;
-  Unpermitted collaboration;
-  Plagiarism;
-  Revising and resubmitting a marked quiz or examination paper for re-grading without the instructor's knowledge and consent;
-  Giving or receiving unpermitted aid on take home examinations;
-  Representing as one's own work, the work of another, including information available on the internet;
-  Giving or receiving aid on an academic assignment under circumstances in which a reasonable person should have known that such aid was not permitted; and
-  Committing a cyber-offence, such as, breaking passwords and accounts, sharing passwords, electronic copying, planting viruses, etc.

I accept that any act of mine that can be considered to be an Honour Code violation will invite disciplinary action.

Date.....

Student's Signature.....

Name.....

Entry No.....