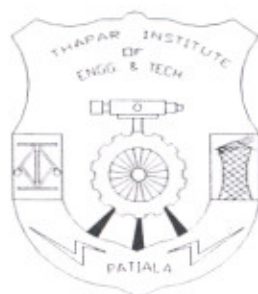


Thapar Institute of Engineering & Technology
(DEEMED UNIVERSITY)
PATIALA



Director's Report
by
Dr S C SAXENA

EIGHTEENTH CONVOCATION
OCTOBER 08, 2004

DIRECTOR'S REPORT

Hon'ble Chief Guest of the day, Sh. Sunil Bharti Mittal, Chairman and Group Managing Director, Bharti Enterprises; most revered Sh. Gautam Thapar, Vice Chairman and Managing Director, BILT; most respected Shri K. K. Nohria, Chairman, Board of Governors; esteemed members of the Patiala Technical Education Trust; revered members of the Council, the Board of Governors and the Senate of the Thapar Institute of Engineering and Technology; respected officers of the Central and the State Governments; distinguished Guests; members of the electronic and print media, my esteemed colleagues; beloved degree recipients and their proud parent; my young student friends; ladies and gentlemen.

It is indeed a matter of great honour and privilege for me to extend a very warm and hearty welcome to you all to this 18th convocation of the Thapar Institute of Engineering and Technology, Patiala. I would like to extend a very warm welcome and express our deep sense of gratitude to Sh Sunil Bharti Mittal, for graciously accepting our humble invitation to be the Chief Guest today. I am sure, Sir, that your presence here today will be enthusing and inspiring to all of us.

On this day, we are reminded of how a young citizen of Punjab, the late Lala Karam Chand Thapar, appreciating the policy of the Government to produce educated and trained technical manpower in large numbers to meet the demands of rapid industrialization, responded to the then PEPSU (Patiala and East Punjab States Union) Government for starting this Institution as a collaborative venture. Thapar Institute of Engineering and Technology, thus, came into existence in 1956 through an imaginative collaboration between the then State of PEPSU, the Central Government and the Patiala Technical Education Trust (PTET) founded by Lalaji. The goals of the Institute as embodied in the Trust Deed dated April 9, 1956 are truly remarkable for their scope and vision.

Nurturing and expansion of this Institute became the mission of late Lalaji's equally illustrious son, Shri L M Thapar, the President of the Institute. His inspiring vision and perseverance, coupled with deep commitment of the premier group of trustees, present and past members of the Governing bodies, and the dedicated endeavor of the successive

generations of faculty has taken the Institute to new heights. As a fitting recognition of its laudable achievements and its pioneering role in promoting the growth and development of the nation, TIET was granted full autonomy and the status of a Deemed University in 1985 by the University Grants Commission (UGC) of India. In its conscious quest for excellence, TIET has decided to confine its instructional programmes to a few carefully chosen specializations, keeping the needs of the country and the region into consideration, particularly in the emerging disciplines.

THE INSTITUTE

The Thapar Institute has steadily and impressively grown in size and activities during more than forty-eight years of its existence. Over 10,000 engineers have left the portals of the Institute so far, distinguishing themselves as proud Thaparians in diverse fields of Science, Engineering, Technology and Management in our country and abroad.

The Institute has seven **Departments**: Biotechnology & Environmental Sciences, Chemical Engineering, Civil Engineering, Computer Science and Engineering, Electrical and Instrumentation Engineering, Electronics and Communication Engineering and Mechanical engineering; four **Schools**: Chemistry and Bio-Chemistry, Physics and Material Science, Mathematics and Computer Applications, and Management and Social Sciences; and eight **Centres**: Central Library, Centre for Industrial Liaison and Placement, Centre for Information Super Highway, Computer Centre, Central Workshop, Centre of Relevance and Excellence, University Science and Instrumentation Centre, and Health Centre.

Over the years, engineering education in India has undergone significant changes in terms of goals, approaches and contents. Today, a well-trained engineer is expected to possess knowledge of basic and applied sciences and scientific methods, an in-depth understanding of and professional competency in his/her area of specialization, versatility to work with inter-disciplinary groups and sensitivity to the needs and aspirations of the industry in particular and the society at large. The curriculum at TIET has been designed to produce engineers who would be capable of meeting these goals and is reviewed and updated periodically to ensure continued relevance.

FEATURES OF ACADEMIC PROGRAMMES

The Institute strives to foster among its students a strong desire and capacity for continuous learning as well as self appraisal to develop sterling human and professional qualities and a strong sense of service to society through well designed curricular and co-curricular activities, and congenial campus environment.

Undergraduate engineering students are taught a series of courses in basic sciences to develop understanding of scientific principles and methods, analytical ability and rigour. These courses are followed by courses in engineering sciences to provide a smooth transition from basic sciences to professional engineering courses. A series of courses in technical arts are designed to develop engineering skills through training in engineering drawing, measurements, computing skills, manufacturing technology and effective communication. The professional courses in the chosen field of specialization are meant to develop creative abilities for the application of basic and engineering sciences to engineering problems involving planning, design, manufacturing, maintenance and research and development. In addition, courses in humanities and social sciences are incorporated to develop appreciation of the impact of science and technology on society.

The basic structure and philosophy of the postgraduate education in engineering in the country has been uniformly maintained by the institute in offering various M.E. programmes. All the M.E. programmes, regular or part-time, have their course work classified into two major categories: Core Courses and Elective Courses. The core courses are aimed at imparting knowledge of the relevant basic analytical tools and techniques necessary to build-up on the elective (professional) courses. Elective courses are of professional nature. Presentation of a Seminar in addition to the course work and a thesis/dissertation are necessary components of the postgraduate degree.

There is no laid down course work requirement for the Doctoral Degree Programme for candidates registering after obtaining M.E./M.Tech./M.Sc. degree. The provisions in the rules and regulations governing the programme aim at ensuring high quality of research leading to Ph.D./D.Sc. degree. These programmes are offered on both regular and part-time basis. Ph.D./D.Sc. thesis is evaluated by a panel of examiners drawn from the peer group on the topic, both from India and abroad.

As in all preceding years, this year too, our Institute was accorded first preference by admission seekers to all our B.E./B.Tech./M.C.A. programmes in this part of the country.

ADMISSIONS

In its efforts to move ahead and to widen the student representation across the country, the admissions to the Undergraduate Programme were made through All India Engineering Entrance Examination (AIEEE) conducted by CBSE, New Delhi. The Programme-wise data of students admitted in July/August 2003 and July/August 2004 is given below:

Programme	Admitted	
	July/August	July/August
	2003	2004
B. E.	433	445
B. E. (Under LEET)	55	58
M. C. A.	60	60
M. Sc. Biotechnology	28	28
M. E.	103	145
Ph. D.	13	22
Total	692	758

DEGREE RECIPIENTS

Today we have awarded a total of 528 degrees in this 18th Convocation. The break-up is as under:

Programme	Number of Degree recipients
B. E.	364
M. C. A.	60
P.G. Diploma	02
M. Sc. Biotechnology	28
M. E.	66
Ph. D.	08
Total	528

AWARDS

During this Convocation, a total of 18 students have received medals/awards for their outstanding and meritorious academic, scholastic and all-round performance. Besides this, 32 students were awarded medals for securing first position in their respective branches for various programmes during the Annual Academic Prize Distribution Function. Another 66 students received book prizes worth Rs 1000/-, Rs 800/- and Rs 600/- for securing first, second and third positions respectively in their branches.

I am proud to extend, on behalf of the faculty and staff of the Institute and on my personal behalf, our heartiest congratulations to all the degree recipients on successful completion of their academic programmes and to all those who are recipients of medals and prizes for their outstanding performance.

CAMPUS PLACEMENT

During the academic year 2003-2004, 85 Companies visited TIET and 300 students were offered jobs through campus placement till August 20, 2004. Results from many other organizations are still awaited. It is worthwhile to add here that 88% of the students with first division got placed during the year. This figure compares well with the very best of the Institutes in Technical Education in India. Organizations are still visiting our campus even for the students who have already passed out from our Institute and hence the above figure is likely to reach 95% for the first divisioners.

M/s TATA Elxsi, ABB, Hughes Software Systems, Essar Group, Jindal Steels, Cognizant Technology, Bhartia Industries Limited, Accenture Industries Limited, Verizon Data Services, Rebus-Ix Limited are some of the companies which visited the campus for the first time, this year.

FACULTY

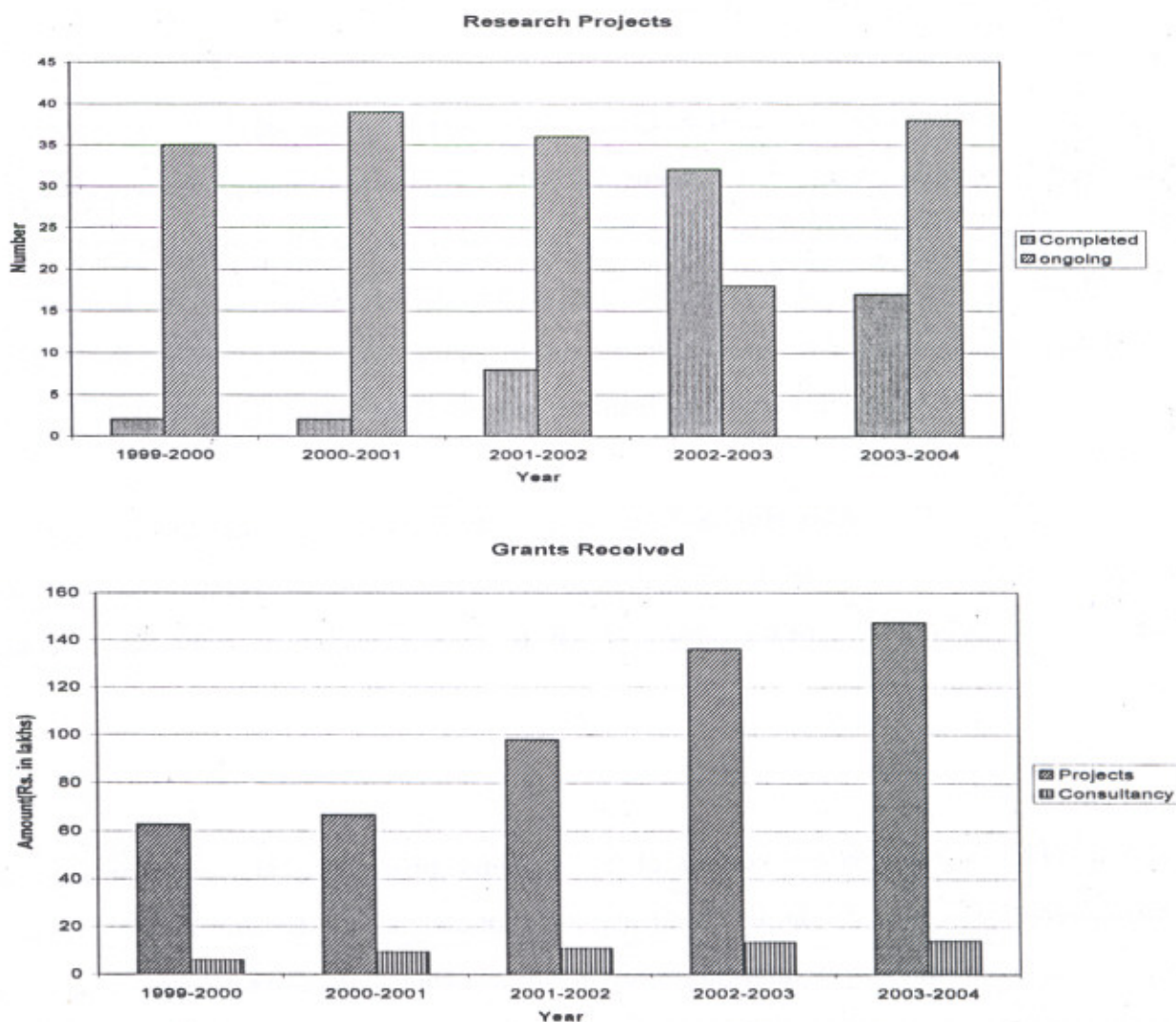
Faculty of an Institute is the nucleus of the academic programme and guardian-angel of maintaining the highest standards. The faculty has kept the pace for disseminating knowledge, upgrading qualification, and publishing work in journals, contributing to seminars/conferences, investigating research projects and recognition and awards.

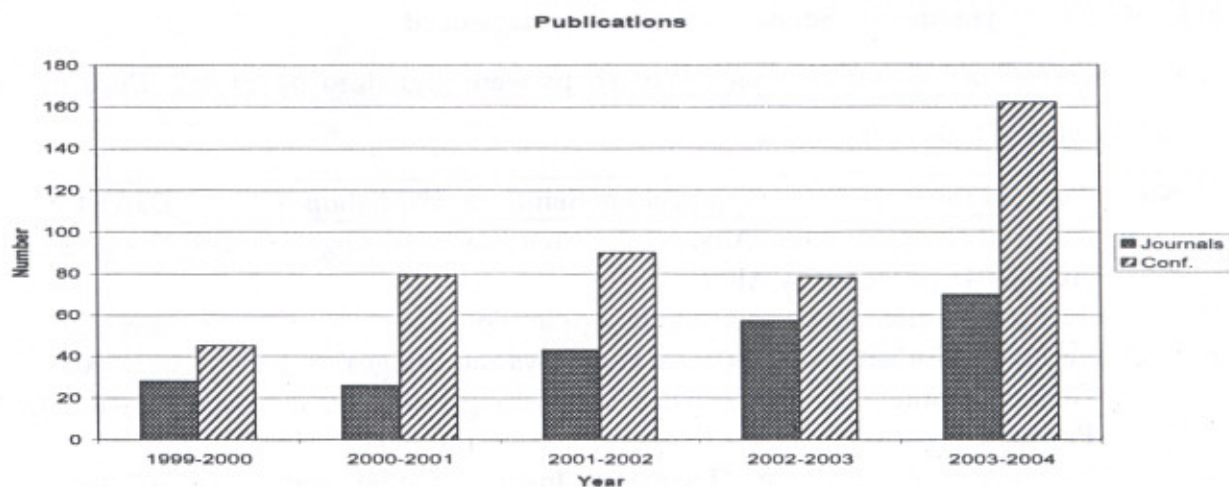
Research and Development Activities

As compared to the year 2002-2003, this year saw an increase in the research activities, wherein more funds were received for sponsored projects, higher number of Ph. D students got registered and resource generation through consultancy also increased.

Out of the sponsored projects received from various funding agencies (UGC, AICTE, DST and DOE, etc), 17 were completed in the year under review and 38 projects are ongoing and progressing towards their completion. We have received fresh grant to the tune of Rs.147.36 lacs during the year 2003 – 2004.

During the year, 70 technical papers were published in reputed national and international journals, and 162 research papers were presented/published in conferences, seminars and workshops.





The Institute is proud to have a Centre of Relevance and Excellence (CORE) in the area of Agro & Industrial Biotechnology under TIFAC – Mission REACH; Resource Centre for Indian Language Technology Solutions of Ministry of Information Technology, GOI; Centre for Academic Network for Continuing Education (C-NANCE) in a scheme being operated through an MOU between AICTE and SUN Micro Systems India Pvt. Limited; and Centre of CII-TDB TNET.

A comparison of activities compared with the previous year is given in the Table below.

Activity	2002 – 2003	2003 - 04
Sponsored Projects		
• Received	10	20
• Ongoing	18	38
• Completed	32	17
• Funds received (Rs. In lakh)	136.18	147.36
• Equipment (through projects)	68.40	81.28
Technical Papers		
• Published in Journals	69	70
• Published/presented in seminars, conferences and workshops	88	162
Ph. D. Theses		
• Ongoing	82	116
• Completed	02	06
Resource Generation through Consultancy (Rs. In lakh)	10.50	12.00

b) Conferences/Symposium/ Seminars/ Workshops organized

11 Conferences/Symposium/ Seminars/ Workshops were organized by various Departments during the year as listed in the report.

Sr. No.	Topic of the Conference/Symposium/ Seminars/ Workshop	Date(s)
1.	National Conference on "Advances in Concrete Technology", ACT-2004 Sponsored by AICTE	Feb 25 – 26, 2004
2.	Technical Workshop on "GIS and Its Applications"	Aug 8, 2003
3.	Technical Workshop on "National Highways and Bridges"	Aug, 2003
4.	National Conference on "Software Engineering Principles & Practices"	March 5 – 6, 2004
5.	National Conference on "Trends in Instrumentation and Control"	Feb 5, 2004
6.	National Conference on "Recent Developments in Mechanical Engineering" (NCME-2003)	Oct. 31 - Nov. 1, 2003
7.	One day National Seminar on "Future of Humanity and India's Role in It" organized alongwith Sh. Aurobindo Society	Oct 7, 2003
8.	Workshop on "Improving Classroom Communication for Active Learning"	Sept 12-13, 2003
9.	National Seminar on "Intellectual Property Rights" Sponsored by MHRD	Mar 26-27, 2004
10.	National Conference on "Materials and Related Technologies" Organized alongwith USIC	Sept 19-20, 2003
11.	National Symposium on "Higher Technical Education – Issues of Access and Delivery"	Nov 22-23, 2003

c) Short – Term Courses

Faculty members of the Institute organized a large number of short-term education programmes. The list of short-term courses organized is as under:

Sr. No.	Topic of the course	Date(s)
1.	Short term course on "Microbiology Technology"	Dec 20, 2003 – Jan 01, 2004
2.	Short term course on "Field Soil Testing for Engineers"	Oct 17-18, 2003
3.	AICTE sponsored Staff Development Programme on "Object Oriented Analysis, Design and Programming using C++/java"	June 07-18, 2004.
4.	Short Course on "Microsoft Office" by CSED in collaboration with SPIC Microsoft Centre of Excellence, Chandigarh for Institute Secretarial and Technical staff	June 14-25, 2004.
5.	Short Term Course on "Virtual Instrumentation & its Engineering Application"	Oct 30, 2003
6.	Short term training programme on "Waste Minimization"	Sept 19-20, 2003

7.	Short term training programme on "Cost cutting through waste minimization and quality improvement"	May 28, 2004
8.	Short term course on "Adoption of Technological changes in Engineering Education"	June 21 – July 2, 2004
9.	Short term training programme on "TQM through Six Sigma" for Asst. Prof. and above	Jan 21, 2004
10.	Short term training programme on "TQM through Six Sigma" for lecturers	April 25, 2004
11.	Computer Awareness Programme organized for children from weaker sections of the society	June 15 - 24, 2004
12.	Refresher course on "Computer Maintenance"	May 31, 2004 to June 01, 2004
13.	Short Term course on "Microbial Technology – Emerging Trends in Bio-analytical Techniques"	Nov 20, 2003 – Dec 01, 2003
14.	Training Programme on "Rural Entrepreneurship Development programme in Carpentry and Welding"	June 7, 2004 – July 15, 2004

RECOGNITIONS AND ACCREDITATIONS

All undergraduate programmes being offered by the Institute have approval of the All India Council of Technical Education (AICTE). All the B.E. programmes are accredited by AICTE with "A" grade for five years, the best rating that any Institution can get. All the Departments and Schools of the Institute are certified as complying to the requirements of ISO 9001 by STQC, a wing of Ministry of Information Technology, Government of India. The Institute has been accredited by NAAC-UGC and awarded a score of 82%. University Grants Commission (UGC) has selected Thapar Institute of Engineering and Technology, Patiala, for networking in the very first phase of a prestigious national level programme known as UGC-Infonet. UGC Infonet targets to provide a seamless, broadband, scalable nation wide inter university link.

HONOURS AND COMMENDATIONS

- Dr. S. C. Saxena represented as a member of the organizing committee of the International Conference being organized by International Disordered - Systems Associates Society (INDIAS) at Goa University during September 24-26, 2004.
- Dr. S. C. Saxena represented as a member of the Academic Council, University of Petroleum & Energy Studies, Dehradun.

- Dr. S. C. Saxena visited Institute of Engineering & Management, Calcutta during December 5-7, 2002 as the Chairman of the Expert Committee on behalf of the National Board of Accreditation, AICTE, New Delhi.
- Dr. S. C. Saxena attended the National Conference cum Exposition organized by Confederation of Indian Industry and chaired a session on 'Advancements & Energy Efficiency in Centrifugal Pumps' on December 19, 2003 at CII (Northern Region), Chandigarh.
- Dr. S. C. Saxena, was the Chief Guest at the Inaugural Function of the short term course on "Digital Signal Processing and Its Applications," at Sant Harchand Longowal Central Institute of Engineering & Technology (SHSLCIET), Longowal, December 22, 2003.
- Dr. S. C. Saxena was nominated as the member, Governing Body, Moradabad Institute of Technology, Moradabad
- Dr. S. C. Saxena represented as a member, National Advisory Board of National Conference, organized by Sant Harchand Singh Longowal Central Institute of Engineering & Technology (SHSLCIET), Longowal, March 26-27, 2004.
- Dr. S. C. Saxena was nominated as a member, National Academic Planning Committee, XXVIII Indian Social Science Congress on the Crisis of Modern Civilization being organized by the Indian Academy of Social Sciences, Allahabad.
- Dr. S. C. Saxena was nominated as the member, Academic Council, National Institute of Technical Teachers' Training & Research, Chandigarh.
- Dr. S. C. Saxena was selected as the President, Patiala Management Association.
- Dr. S. C. Saxena, visited SJCS Institute of Tech., Chickballpur, Kolar Distt. Karnataka during June 11-13, 2004 as the Chairman of the Expert Committee on behalf of National Board of Accreditation, AICTE, New Delhi.
- Director, TE, Haryana, nominated Dr. N. K. Verma as Chairman of the Inspection Team for updation and starting of new polytechnics
- Dr. (Mrs.) Vasundhara Singh received Career Award for Young Teachers from AICTE.
- Dr. Maneek Kumar visited Kennedy Space Centre, Florida, USA, in July 2004 as teacher advisor of the team which won the first prize in International Space Settlement Design competition.

- Dr. T.P. Singh was appointed as a member of National Board for Accreditation (NBA) visiting committee for evaluation of Mechanical Engineering Programme at Gausia College, Ramanagarm, near Bangalore.
- Sh. S C Jain was honoured by Indian Red Cross Society in recognition of his selfless services for the welfare of humanity on the occasion of "World Red Cross Day". He has donated blood 75 times and has organized more than 250 blood donation camps.

STUDENTS WHO WON MEDALS

- **Presidents' Medal** for the academic year 2003-2004 has been awarded to Mr. Hardeep Singh Brar, a student of B. E. Mechanical Engineering, who topped the list of successful candidates in all disciplines of final year B. E. examination.
- This year's **HMT Medal** for best student in Mechanical Engineering has been awarded to Mr. Hardeep Singh Brar.
- The **S. Ranbir Singh Gold Medal** for the All Round Best Student for the year 2002-2003 has been awarded to Mr. Hardeep Singh Brar, a student of B. E. Mechanical Engineering.
- This year's **Prof. V. Rajaraman Computer Science & Engineering Award** has been given to Ms. Jaspreet Kaur Oberoi a student of B.E. Computer Science and Engineering.

CORPUS FUND

Corpus fund of the Institute, created as a source to update the development of the Institute, is expanding at a steady pace. An amount of Rs. 9629304.07 was generated through earnings from professional consultancy, services provided, contributions from salaries of faculty and staff, donations from Thapar Group of Industries and alumni of the Institute during the year.

As on March 31, 2004 the total amount accumulated in the corpus fund stood at Rs 6,64,14,000=00

INFRASTRUCTURAL DEVELOPMENT

a) Laboratory Development

Laboratories in various Departments/Schools/Centres were strengthened and upgraded at a total expenditure of Rs. 249 lakhs.

b) Construction Works Completed During the Year 2003-2004

1. First phase of the sewerage disposal scheme connecting the sewerage disposal of the residential areas with centralized disposal pump
2. Installation of D. G. set 320 kVA with A.M.F panel at Substation – I and shifting of old DG set 125 kVA along with old LT panel at Substation - II
3. Extension of C – Block first floor including interiors, electrical and air conditioning works
4. Renovation of the swimming pool complex (Phase 1)
5. Construction of cemented lawn tennis courts with fencing and lighting system
6. Construction of new lecture hall complex – II with two nos. of flexible halls and four nos. of lecture halls at ground floor with full multi media and audio visual facilities and digital class, and eight nos. of lecture halls at the first floor.
7. Augmentation of the capacity of the existing centralized UPS system from 75 kVA to 150 kVA
8. Construction of the cricket pitch with allied works
9. Augmentation of the capacity of Hostel – C from 186 to 282 seats with construction of new rooms and covering/renovation of the existing verandahs

c) Works in Progress/ to start during the Year 2003-2004

1. Construction of the new Undergraduate Boys Hostel of 360 seats capacity (20 dormitories). About 25% of the work is complete till date.
2. Construction of the new Girls Hostel (GH- III) of 300 seat capacity. Till date 20% of the work is complete.
3. Construction of link block between B & C blocks. Work likely to be completed by October end.

d) Plans for 2004-05

1. Shopping complex with a club building at the first floor
2. Extension of guest house and construction of Alumni House
3. Construction of Auditorium of 1500 seating capacity
4. Construction of new main entrance of the Institute with approach roads etc
5. Construction of new four lane road opposite the bank and widening of the existing roads
6. Block for the Centre for Industrial Liaison and Placement Cell (CILP)

STUDENTS ACTIVITIES

The variety of options in Institute's curricula is accompanied by a choice of activities outside the classrooms. Every student has enough opportunities to participate in and contribute to a multitude of co-curricular activities. Students are active members of the Institute community, and interact closely with the faculty, staff and their families in contributing to all major happenings on the campus. There are nine Institute Level Societies, eight Departmental Societies and two Student Chapters actively engaged in these activities.

Games And Sports

- The Institute teams participated in All India Inter Engineering Tournament BOSM, 2003 held at BITS, Pilani from September 18-22, 2003 and got the following positions:

<u>Game/Event</u>	<u>Medals</u>
Tug of war	Gold
Cricket	Bronze
Hockey	Bronze
Swimming	Bronze

- The 48th Annual Athletic Meet was held on March 10, 2004, which was inaugurated by Dr. S.C. Saxena, Director of the Institute and the Prizes were given by Sh. K.K. Sharma, Chairman, Improvement Trust, Patiala.

MUDRA

- Music & Dramatics Society organized MUDRA NITE on September 29-30, 2003.
- The annual Inter Year cultural competition, 'IZHAAR-2003', was held from November 14-16, 2003. The two and half day cultural extravaganza brought on stage some of the immaculate performances by students in fields such as music, dramatics and dance. The Third Year won the overall trophy.
- On the eve of the 48th Annual Athletic Meet held on March 10, 2004, MUDRA Society organized a cultural evening.

SPIC MACAY

- SPIC MACAY organized an enthusiastic performance of "MANIPURI DANCE" by Padma Shri Rajkumar Guru Singhajit Singh and Smt. Charu Sija Mathur, the most learned, and renowned artists of the nation, on November 5, 2003. The dance performance was highly professional and enchanted everyone in the audience.
- SPIC MACAY organized a professional play "JIS LAHORE NAHIN VEKHEYA" by Padma Shri Habeeb Tanvir, a world renowned writer, poet and dramatist, on November 10, 2003. A group of 25 artists assisted him in the play. The performance created a definite aura and brilliance, which was a great treat to watch, and was highly appreciated by the huge gathering.

ALUMNI ASSOCIATION

The Alumni Relation Office updated the TIET Alumni database and put this information on the website of the Institute. The TIET Alumni database has 9704 entries as per the following details:

Programme	Number of entries in Institute database
BE	8065
ME	790
MCA	632
M. Sc.	125
M.Sc. Bio Tech	22
PG – Diploma	30
Ph. D	40
TOTAL	9704

The Alumni Relation Office continued to act as liaison between the alumni and the Institute. Alumni Association plans to have an Alumni House for which some funds have already been collected. TIET Alumni Association Executive Committee has granted two students a sum of Rs 50000/- per annum as Alumnus Ward Scholarships.

Distinguished Alumnus Award was given to Sh. Jagmohan Kaul (B.E. Mechanical Engineering 1964 batch)

ACKNOWLEDGEMENT

We are indebted to Sh Sunil Bharti Mittal, for very kindly accepting our humble invitation to be the Chief Guest and delivering his thought provoking address which, coming from a Chief Executive of the prestigious Bharti Enterprises, is a real source of inspiration to our graduating students.

I would also like to take this opportunity to express our gratitude, on behalf of my colleagues and on my personal behalf, to Sh. Gautam Thapar, for his deep personal commitment to our goals and constant support to our efforts to pursue excellence. We are

grateful to Sh. K.K. Nohria, Chairman, Board of Governors, for his keen interest in the management of the Institute. Our thanks are also due to all members of the Council, the Board, the Senate, and other statutory bodies of the Institute for their interest and valuable guidance in the development of the Institute.

We are grateful to Government of India, Government of Punjab, Patiala Technical Education Trust, University Grants Commission, All India Council of Technical Education, Ministry of Human Resource Development, Department of Science and Technology, Department of Biotechnology, Ministry of Information Technology, and other funding agencies for their support to the Institute.

Last, but not the least, I express my deep sense of gratitude to our faculty, administrative and supporting staff and students, and our colleagues at TCIRD and Thapar Polytechnic for their cooperation in furthering the progress of the Institute to achieve its goals.

Before I sign off, I would like to share with my dear students a quote by George Bernard Shaw:

This is the true joy in life – that being used for a purpose recognized by yourself as a mighty one. That being a force of nature, instead of a feverish, selfish, little clod of ailments and grievances complaining that the world will not devote itself to making you happy. I am of the opinion that my life belongs to the whole community and as long as I live it is my privilege to do for it whatever I can. I want to be thoroughly used up when I die. For the harder I work the more I live. I rejoice in life for its own sake. Life is no brief candle to me. It's is a sort of splendid torch which I've got to hold up for the moment and I want to make it burn as brightly as possible before handing it on future generations.

Always remember, "What lies behind us and what lies before us are tiny matters compared to what lies within us!".

Thanking you all once again,

JAI HIND

S. C. Saxena