

DEPARTMENTS

DEPARTMENT OF BIO-TECHNOLOGY

CHEMICAL ENGINEERING DEPARTMENT

CIVIL ENGINEERING DEPARTMENT

COMPUTER SCIENCE & ENGINEERING DEPARTMENT

ELECTRICAL & INSTRUMENTATION ENGINEERING DEPARTMENT

ELECTRONICS & COMMUNICATION ENGINEERING DEPARTMENT

MECHANICAL ENGINEERING DEPARTMENT

DEPARTMENT OF BIO-TECHNOLOGY

Section 1

1. Academic Programs

Biotechnology was initiated in 1993 with Ph.D program thereafter M.Sc in Biotechnology was started in 1999 with the support from Department of Biotechnology, Ministry of Science and Technology, Govt. of India. It started B Tech in Biotechnology from 2002 and then MTech in Biotechnology from 2012. Focus of the Department is primarily to excel both in academics and research in the frontier areas of modern biotechnology and related fields. The focus of these academic programs is to provide excellent environment and state-of-the-art infrastructure for hands on training with industrial training. The potentials in Biotechnology were further recognized by Department of Science and Technology, Govt. of India and under Mission Reach, TIFAC-CORE (Centre of Relevance and Excellence) in Agro and Industrial Biotechnology was set up in the year 2000 and STEP (Science and Technology Entrepreneur's Park) in microbial and food technology was set up in 2005 by NSTEDB, which provides extensive support to research, human resource development and offers new opportunities to students for skill development and promotion of entrepreneurship and new start ups from amongst the students.

2. List of faculty

Professor

S.No	Name	Qualification & Specialization
1.	Dinesh Goyal	M.Sc, Ph.D Microbiology, bioremediation, algology
2.	M.S. Reddy	M.Sc, Ph.D Plant-microbe interactions/ Molecular Biology
3.	Niranjan Das	M.Sc, Ph.D Plant Molecular Biology
4.	Sanjai Saxena	M.Sc, Ph.D Plant-microbe interaction, natural products, drug discovery
5.	Moushumi Ghosh	M.Sc, Ph.D Environmental Biotechnology

Associate Professor

S.No	Name	Qualification & Specialization
1	Dr Anil Kumar	M.Sc, Ph.D Plant Biotechnology, Plant Genetic Manipulations

Assistant Professor

S.No	Name	Qualification & Specialization
1.	Vikas Handa	M.Sc, Ph.D Genetic and Epigenetic Gene Regulation
2.	M.Vasundhara	M.Pharm, Pharmaceutical Technology
3.	Manoj Baranwal	M.Sc, Ph.D Immunology
4.	Siddharth Sharma	M.Sc, Ph.D Cancer Biology
5.	Shekhar Agnihotri	M.Tech, Ph.D Bioprocess Technology, nanotechnology
6.	Jyoti Rani	M.Sc, Ph.d Food Science & Technology

3. Thrust areas of research

The focus research areas are applied microbiology and biotechnology, Plant biotechnology, transgenics and plant tissue culture, bioremediation, microbial concrete, pollution abatement and natural products/bioactive molecules from microbial and plant sources, cancer biology, immunoinformatics, food microbiology and food safety. Life sciences and applications of nanotechnology and bioinformatics tools. Future projections are also on cancer biology, immunology, nano-biotechnology and food technology and their applications in various fields and combining with other disciplines such as chemical engineering, biomedical engineering and information technology.

4. New Plans and Projects

New plans are working with Tel Aviv University, Israel in the area of modern agriculture and food security. Develop center for food security and find more opportunities for students and post-doctoral fellows.

5. Departmental Achievements

- Papers published in SCI Journals- 35
- Papers published in Non SCI Journals-3
- Papers published in conferences-6
- Sponsored Research Projects Ongoing : Number of Projects and Amount (in Rs Lakhs) 10 & 378.026 Lakhs
- Seminar/Conference/Workshop organized: Two
- Doctoral Degree Awarded-3
- Lectures by visiting experts 1
- Visits abroad by faculty members 3
- Awards and Honors - 4

6. List of ongoing sponsored projects

1. Novel gene pool from copper polluted soil ecosystem using metatranscriptomic approach
2. Production of high fructose syrup from cellulosic agro-waste using dual enzyme immobilization on nano-template as recyclable biocatalysts
3. Utilization of banana stem juice for renewable energy and value added products
4. Isolation and Characterization of Xanthine oxidase inhibitors from endophytic fungi for treatment of Hyperurecimia and Gout
5. Cloning and characterization of genes of Glutathione biosynthesis in ectomycorrhizal fungi
6. Durability enhancement and prevention of damages in RC structures using bacteria
7. Gene Resources from polluted soils
8. Green Polymers for water borne pathogen and their treatment
9. Development of treatment and regeneration technology for phytoestrogens from waste water streams
10. Science & Technology Entrepreneurship Park (STEP) in Agro Biotechnology

7. List of completed sponsored projects

1. Association of Single Nucleotide Polymorphisms and Methylation status in the Wnt and AhR signaling pathways with risk for occurrence of Lung Cancer in a North Indian Population.
2. In Silico and in vitro Approach to identify immunogenic peptides of H1N1 Virus as a target for Vaccine design

8. Information regarding foreign visits

1. Dinesh Goyal visited Tel Aviv University, Israel for Collaboration in biotechnology and food safety and security and life sciences on March-April, 2016

2. Dr Moushumi Ghosh visited AAS To present research outcomes at ICEST, Houston, Texas, USA on June 6-9, 2016
3. Dr. Sanjai Saxena visited Tel Aviv University for Collaboration in biotechnology and food safety and security and life sciences on March-April 2016

9. List of Awards and recognitions

1. Dr. M.S.Reddy received Talented Innovative Scientist Award – INDICASAT by Association of Biotechnology and Pharmacy in the year 2015
2. Dr Moushumi Ghosh was nominated by AAS as Chair and Advisor, Technical session on sustainable Env. applications, ICEST 2016, Houston, Texas, USA by American Academy of Sciences during 6-9th June, 2016
3. Dr Moushumi Ghosh was Awarded, International Travel grant for ICEST, USA DST, GoI during 6-9 th June, 2016

CHEMICAL ENGINEERING DEPARTMENT

The department of Chemical Engineering was successful in getting 2 new sponsored projects (worth 49.76 Lakhs). The University's appreciable funding has also been received for strengthening of various laboratories and establishing new IPA laboratory.

The faculty of the department has published 30 research papers in SCI Journals. Number of full time Ph.D. students has increased to 20, majority of them are getting fellowships from sponsored projects (DST, NRB, CSIR, DAE-BRNS) or Government fellowship programs. A new student chapter of American Institute of Chemical Engineers (AIChE) has been established in the department.

The placement of the undergraduate students has been excellent and almost all the final year students securing CGPA 6 and above have been placed in companies like Reliance, UOP, ACC, MU Sigma Business Solution, TCS, Infosys, IBM (India), Jindal Steel Works, Simon India, Ranbaxy Laboratories, Flour Daniel, IOL Chemicals and Pharmaceuticals Ltd.

A Ph.D. scholar of the department, Dr. Gaurav Madhu, has been appointed as the Joint Director & Associate Professor, Indian Institute of Packaging (IIP), Mumbai.

A Ph.D. scholar of the department, Dr. Chitrakshi Goel, has joined as a post doctoral fellow, Laboratory for Chemical Technology, Ghent University, Belgium.

1. Academic Programs

- B.E. Chemical Engineering
- M.Tech. Chemical Engineering
- Ph.D. Chemical Engineering

2. List of faculty

Professors

S.No	Name	Qualification & Specialization
1	Dr. D. Gangacharyulu	Ph.D., Heat transfer and Energy
2	Dr. Rajeev Mehta	Ph.D., Polymers
3	Dr. Haripada Bhunia	Ph.D., Polymers, Industrial Pollution Abatement

Associate Professors

S.No	Name	Qualification & Specialization
1	Dr. Raj Kumar Gupta	Ph.D., Modeling & Simulation, Reaction Engg., Heat Transfer, Membrane Separations
2	Dr. Sanghamitra Barman	Ph.D., Reaction Engg and Mass Transfer
3	Dr. Vikas Kumar Sangal	Ph.D., Modeling & Simulation, Industrial Pollution Abatement

Assistant Professors

S.No	Name	Qualification & Specialization
1	Dr. Sanjeev Kumar Ahuja	Ph.D., Process Modeling
2	Dr. Raj Kumar Arya	Ph.D., Chemical Engineering

S.No	Name	Qualification & Specialization
3	Dr. Jai Prakash Kushwaha	Ph.D., Environmental Engineering, Separation Processes
4	Dr. Vijaya Kumar Bulasara	Ph.D., Membrane separation, Adsorption, Reaction engineering
5	Dr. Avinash Chandra	Ph.D., Computational Fluid Dynamics (CFD); Process Diagnosis Using Radiotracer Technique; Fluid flow and Heat Transfer; Essential oil from bioresources
6	Dr. Sudhir Kumar Singh	Ph.D., Molecular Simulation, Thermodynamics
7	Dr. Neetu Singh	Ph.D., Chemical Engineering
8	Mr. Parminder Singh	M.E. (Ph.D. pursuing), Thermodynamics
9	Mr. Rakesh Kumar Gupta	M.Tech. (Ph.D. pursuing), Chemical Engineering

Lecturer (Ad-hoc/Contractual)

S.No	Name	Qualification & Specialization
1	Mr. Alok Garg	M.Tech. (Ph.D. pursuing), Wastewater treatment

3. Thrust areas of research

Adsorption, Bioprocessing, Catalysis, Computational fluid dynamics, CO₂ capture and sequestration, Polymers, Polymer nanocomposites, Divided wall and reactive distillations, FCC modeling and simulation, Heat Transfer and Heat pipes, Industrial pollution abatement, Membrane separations, Molecular modeling, Nanofluids.

4. Brief description of ongoing research activities

1. A Center of Excellence (CoE) in Environment and Energy Management (Phase-II) was started with a grant of Rs. 4.98 crores funded by NPIU, MHRD, New Delhi (under TEQIP-II, 1.2.1 Scheme).
2. At present the department is pursuing research in the following areas.
3. Carbon Capture and Sequestration (CCS): Research activities in this area include polymer production using carbon dioxide, development of adsorbent(s) for CO₂ adsorption, bio-sequestration of CO₂ using algae & cyanobacteria.
4. Heat transfer and heat transfer enhancement: Use of nanofluids in heat transfer applications, experimental and numerical studies on heat transfer from semicircular cylinders, heat pipes.
5. Polymers and polymer nanocomposites: Synthesis of biodegradable polymers and their nanocomposites; Studies on STF - nanoclay based composites for personal armour systems, Shear thickening fluids, Nanocomposites adsorbents, Fibre reinforced composites with nano fillers.
6. Modeling and simulation: FCC, Reactive distillation, Heat Transfer, Divided wall and extractive distillations, CFD, molecular modeling and simulation, RTD models for industrial systems
7. Reaction Kinetics & Catalysis: Transalkylation of alkyl aromatics over modified zeolite catalyst, hydrogen generation from hydrides, catalytic oxidation of furfural to furoic acid, kinetic studies of advanced oxidation processes (AOPs) for wastewater treatment.

8. Separation processes: Application of natural adsorbents and preparation of ceramic membranes for wastewater treatment.
9. Application of radioactive materials: Study of hydrodynamics and RTD using radio-tracers, Radiation grafting of polymers to improve biodegradability.
10. The department has collaborated with industries to study the hydrodynamics and RTD of Industrial systems using radio-traces under sponsored projects. The tracer studies were conducted in the following industries:
 - i. IOL Chemicals & Pharmaceuticals Limited, Barnala, Punjab
 - ii. Shreyans Industries Limited, Ahmedgarh, Punjab
 - iii. Satia Industries Limited, Muktsar, Punjab

5. Activities round the year (2015-16)

1. Harmonization of B.Tech. Chemical Engineering curriculum with Trinity College, Dublin.
2. Experimental facility for CO₂ adsorption on solid adsorbents has been set up.
3. A biodegradability test setup has been developed.
4. Strong interaction with industry through collaborative research projects and joint guidance of PhDs (HPCL R&D, Bangalore; Reliance Industries Limited, Hazira; Setia Paper Mills, Muktsar; CGL, Mumbai; IOLCP, Barnala; Trident, Barnala).

6. New Plans and Projects

1. A number of research proposals are submitted and to be submitted to different funding agencies like CSIR, DST, DRDO, BRNS etc. to strengthen ongoing research in the department.
2. Setting up of radio-tracer application laboratory is planned.
3. Recently, three projects on radio-tracer application for RTD measurements in industrial processes have been sanctioned by DAE-BRNS. The procurement of facilities related to these is planned.
4. Strengthening of industry-institute interaction through collaborative projects.
5. Faculty is preparing research proposals to various funding agencies including NRB, ARMREB, DST and Indo-US DST Scheme.

7. Major acquisitions during the year and new laboratory development

The Department of Chemical Engineering has acquired several major equipment including: pulp digester (16.8 Lakhs), fixed bed apparatus (9.3 Lakhs), semi-circular heat exchanger (3.4 Lakhs), Tubular reactor (2.8 Lakhs) and peristaltic pump (1.8 Lakhs).

8. Departmental Achievements

- Papers published in SCI Journals: 30
- Papers published in Non SCI Journals: 11
- Papers published in conferences: 26
- Sponsored Research Projects New : 2 projects, 49.76 Lakhs
- Sponsored Research Projects Ongoing : 7 projects, 159.6 Lakhs
- Consultancy Projects: 2 project, 5.575 Lakhs
- Doctoral Degree Awarded: 03
- Lectures by visiting experts: 03
- Visits abroad by faculty members: 01
- Awards and Honors: 2

9. List of ongoing sponsored projects

1. Floating wick type vertical
2. Multiple effect diffusion solar still
3. Waste heat recovery
4. Studies on STF-nanoclay based
5. Composites for personal armour systems
6. Measurement of circulation time and optimization of mixing time for ethyl acetate reactor using radiotracer technique
7. Study of Hydrodynamics and RTD of Effluent Treatment Plant (Biological) using Radiotracer
8. Investigation of Hydrodynamics and RTD of Pulp Digester Using Radiotracer Technique
9. Synthesis and characterization of high capacity adsorbents for CO₂ capture
10. Development of non-ecotoxic polyolefins with controlled environmental degradation by using high energy radiation and pro-oxidants.

10. List of completed sponsored projects

1. Application software development to evaluate thermal performance of tube type, air to air heat exchangers for caca high rated electrical motors
2. Processing and characterization of fiber reinforced polymer nanocomposites and their degradation in marine environments
3. Solvent free microwave assisted extraction of essential oil from turmeric
4. Tailoring of Nanostructure for Reversible Hydrogen Storage: Molecular Simulation as a Guiding Tool

11. Consultancy/Testing assignments completed/ongoing

1. Classification of resin coated sand
2. Material Balance and ETP load calculations for New Product Mix
3. Odor Control from MSW Treatment Plant at Bathinda

12. Information regarding foreign visits

Dr. Avinash Chandra Visited Rutgers University, New Brunswick, NJ, USA for Conference on May 2015

13. List of Awards and recognitions

1. Raj Kumar Arya received Best Undergraduate Research Paper Award from IICHE 2015
2. Dr. Sudhir K Singh received Session Chair, in a National Conference ACEE'16. At NIT Jalandhar, Punjab during April 2016



CIVIL ENGINEERING DEPARTMENT

The Department of Civil Engineering with its modern infrastructure and state of the art facilities for research offers programs leading to a Bachelors' Degree in Civil Engineering, a Masters of Engineering Degree in Civil – Structures and Doctor of Philosophy in Civil Engineering. With a number of scholars registered for their doctoral thesis in the department, it has already created a niche for itself in this part of the country and is striving to be among the top ten civil engineering departments of the country.

Although the department is more than 56 years old but it is very young in its spirit with the average age of the faculty around 38 years. The department has kept pace with the changing times by modernizing and upgrading its infrastructural and research facilities. More than 75% faculty members of the department are Ph. D and remaining members are in the advanced stage of completing the same. One student completed their Ph. D during the academic year. The faculty members of the department published 25 research papers in journals and conferences at national as well as international forum, and delivered lectures at reputed institutes/organizations. The faculty members were involved in various testing and consultancy projects amounting more than 1 crore. The department also augmented its laboratories by adding equipment worth nearly 24.62 Lakhs through funding from the university and research projects. The Department of Civil Engineering has been continuing as a Safety Consultant by National Highways Authority of India (NHAI) in the state of Himachal Pradesh & Jammu for Development, Construction and Post COD Maintenance Phase. Also the Department of Civil Engineering acts as a coordinator, State Technical Agency of Pradhan Mantri Gram Sadak Yojana (PMGSY) to scrutinize the DPR's. This year the Department has organized successfully the 7th National Conference on Wind Engineering in association with Indian Society of Wind Engineering.

1. Academic Programs

- BE Civil Engineering
- ME Infrastructure Engineering
- ME Structural Engineering
- ME Structural Engineering
- PhD Civil Engineering

2. List of faculty

Senior Professor

S. No	Name	Qualification & Specialization
1	Dr. Rafat Siddique	B. E., M. E., Ph. D, PDF (Structural Engineering)

Professor

S. No	Name	Qualification & Specialization
1	Dr. Maneek Kumar	B. E., M. E., Ph. D (Structural Engineering)
2	Dr. Naveen Kwatra	Ph.D, Structural Engineering

Associate Professors

S. No	Name	Qualification & Specialization
1.	Dr. Sarbjit Singh	Ph.D, Water Resources Engineering
2.	Mr. Rajesh Pathak	ME, Geotechnical Engineering
3.	Dr. Prempal Bansal	Ph.D, Structural Engineering
4.	Dr. Shweta Goyal	Ph.D, Structural Engineering
5.	Dr. Shruti Sharma	Ph.D, Structural Engineering

Assistant Professors

S. No	Name	Qualification & Specialization
1.	Mrs. Neena Garg	ME, Transportation Engineering
2.	Mr. Tanuj Chopra	ME, Transportation Engineering
3.	Dr. Richa Babbar	Ph.D, Water Resources Engineering
4.	Dr. Tapas Karmaker	Ph.D, Water Resources Engineering
5.	Dr. Gurbir Kaur	Ph.D, Structural Engineering
6.	Dr. Heaven Singh	Ph.D, Structural Engineering
7.	Dr. Aditya Parihar	Ph.D, Geotechnical Engineering
8.	Dr. A.B. Danie Roy	Ph.D., Structural Engineering

Lecturers (Ad-hoc)

S.No	Name	Qualification & Specialization
1	Dr. Sahil Bansal	Ph.D, Structural Engineering
2	Dr. Siva Chidambaram	Ph.D, Earthquake Engineering
3	Ms. Mansha Swami	ME, Transportation Engineering
4	Mr. Raju Sharma	ME, Structural Engineering
5.	Ms. Reema Goyal	ME, Structural Engineering

3. Thrust areas of research

Structural Health Monitoring
Sustainability in Concrete & Concrete Technology
Ground Water Hydrology & Dispersion Studies
Sediment dynamics and River Engineering
Pavement Management System

4. Brief description of ongoing research activities:

Development of Sustainable Concrete Using Coal Bottom Ash

The coal fired thermal power plants are the main source of production of coal ash. The coal ash collected at the bottom of the furnace is called coal bottom ash (CBA). In India, more than 30 million tons of coal bottom ash (CBA) is produced annually. This is by and large is disposed-off in open land adjoining to the power plants, which poses a serious environmental problem. Exploring the use of coal bottom ash in concrete manufacturing as replacement (0-60%) of fine aggregates can be beneficial in two ways; preserving the natural sand, and maintaining ecological balance.

Tests were performed to evaluate the properties of fresh and hardened concrete containing coal bottom ash up to the age of 365 days. Test results indicate that CBA could be suitable used as replacement structural grade concrete, and also in making concrete for paving blocks, etc with larger quantity of CBA.

Detection of Corrosion by Acoustic Emission and Ultrasonic Techniques

In search for an effective method for early detection of rebar corrosion in concrete, the capability of acoustic emission (AE) technique in detecting a weak stress wave makes it a strong candidate for NDE. The primary advantage AE offers over other conventional NDE techniques is that it can directly detect the process of a flaw growth. The use of AE is very attractive because it is highly sensitive to cracks and crack propagation. When corrosion products are formed on a corroding rebar, they swell and apply confining pressure on the surrounding concrete. Micro cracks are formed and stress waves will be generated during the expansion process where the pressure is high enough to break the interface layer. Growth of micro cracks is directly related to the amount of corrosion. By detecting the AE event rate and their amplitude, the degree of corrosion can be interpreted. This project explores the feasibility of using AE technique in conjunction with ultrasonic guided waves for complete rebar corrosion detection.

Investigation of Progression of Corrosion in Submerged Plates by Non-Contact Ultrasonic Techniques

Structural health monitoring and damage detection has been an important area of concern in the design, operation, maintenance and repair of many military and civil naval structures and equipment. Ship structures while in service are likely to be subject to age related deterioration such as corrosion wastage, fatigue cracking or mechanical damage (e.g., local denting) which can give rise to significant issues in terms of safety, health, environment and financial expenditures. Ocean going ships, including naval warships, have a propensity to travel globally and as such they experience the extremes of marine environments which have often been noted to accelerate the decline in the material state of a ship operating, for example, in the Gulf countries. Tropical marine environments as experienced in Indian conditions are far more corrosive than cold European climates because the temperature has a significant impact on the rate of corrosion. Focus of the contemporary research is the investigation of corrosion and its progression in plate specimens simulating ship hulls in uncoated, paint coated and cathodically protected states using ultrasonic guided waves. The effectiveness of the guided wave technique for corrosion monitoring in various states of ship hull structures (as in actual conditions in ships) will be compared with the existing corrosion measuring techniques like UT thickness gaging meters etc.

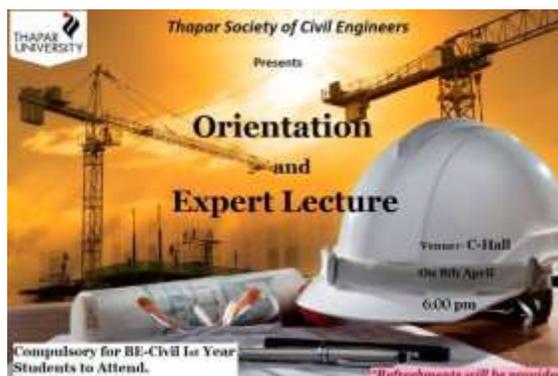
5. Activities round the year (2015-16)

TECHNICAL EVENT: ORIENTATION OF FIRST YEAR STUDENTS

GENERAL GUIDELINES: Introducing students to the various aspects of Civil Engineering.

EVENT CO-ORDINATORS: Devinder Kumar and Manish Gupta

EVENT DESCRIPTION: Orientation lecture introduced the students to the details of mission and vision of the society. The students were told about previous events such as Industrial trips, workshops and guest lecturers organized, etc. New ideas were floated for future Workshops including Bridge designing competition, workshops on softwares like Inclino, STAAD Pro, SAP-2000. Various guest lecture on GATE, research paper publishing etc. were also recommended. The aim of this event to told the student that what is civil engineering and how they are going to spend the next 4years with the Department.



TECHNICAL EVENT: Industrial trip ULTRA-TECH cement plant visit

EVENT CO-ORDINATORS: Jaspreet Singh and Manish Gupta

GENERAL GUIDELINES: A team of maximum 50 students was allowed.

EVENT DESCRIPTION: The visit was organized to obtain the practical knowledge about manufacturing of cement in the cement factory. A group of site engineers at the Cement plant gave us a step-by-step description of the various processes involved in manufacturing and batching of cement. There are two types of raw materials, which are combined to make cement: Lime-containing materials, such as limestone, marble, oyster shells, marl, chalk, etc. Clay and clay-like materials, such as shale, slag from blast furnaces, bauxite, iron ore, silica, sand, etc. These materials are combined together in a furnace at high temperature to make Cement clinkers, which are then broken down into finer particles.

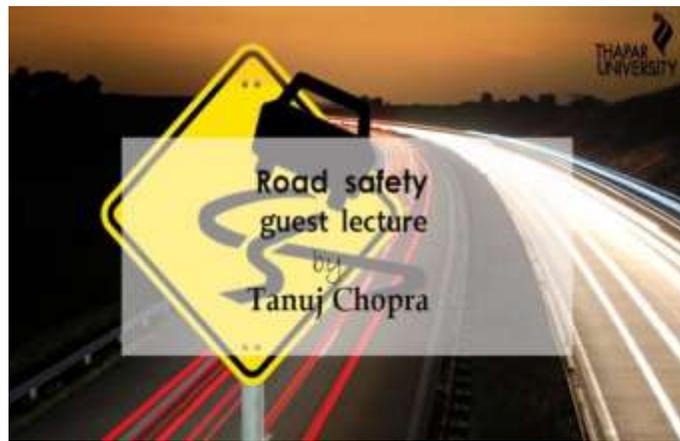


TECHNICAL EVENT: GUEST LECTURE BY Mr. TANUJ CHOPRA

EVENT CO-ORDINATORS: Manish Gupta and Jaspreet Singh

GENERAL GUIDELINES: Lecture on Road Safety.

EVENT DESCRIPTION: The guest lecture was organized by BE Civil Second and Third Year students to highlight the importance of observing road safety measures to avoid road accidents and prevent untimely deaths. The gathering consisted of BE Civil First, Second and Third Year Students in C-Hall of Thapar University. Mr. Tanuj Chopra advised the young minds to avoid rash driving and properly follow Traffic lights and Rules. There should be no criss-crossing of traffic at Roundabouts. Driver should always drive within the speed limit.



TECHNICAL EVENT: A GUEST LECTURE ON BRIDGE CONSTRUCTION BY DIVYARTH DIKSHIT

EVENT CO-ORDINATORS: Jaspreet Singh and Devinder Kumar

GENERAL GUIDELINES: Lecture on Bridge Construction.

EVENT DESCRIPTION: India is a developing country. In view of the increase in population and subsequent heavy congestion in traffic, Bridges and Flyovers are being constructed at a rapid pace to divert the traffic and reduce the pressure on existing Infrastructure. Mr. Divyarth Dikshit, practicing Bridge Design Engineer at **SYSTRA MVA INDIA PVT. LIMITED**, gave the students of BE Civil Third Year and ME Structures 1st Year a brief insight into the techniques followed in Bridge Construction and the challenges faced during the construction. He also briefed the students about the job opportunities and the skill set required to be successful in the Design Sector of Civil Engineering nowadays.

TECHNICAL EVENT: WORKSHOP AND COMPETITION IN BUILDING DESIGN USING STAAD PRO

EVENT CO-ORDINATORS: Jaspreet Singh

GENERAL GUIDELINES: A team of maximum 3 participants can participate in the event.

EVENT DESCRIPTION: STAAD Pro gives you the opportunity to showcase your building designing skills. You would be required to innovate and design challenging structures. Your design will be gauged based on robustness, innovation, power consumption and technical excellence. Put on your thinking caps and design a system with the software provided.

A workshop was held initially to acquaint students with the commands of STADD Pro. Using these guidelines, the candidates have to design a structure .A proper neat diagram has to be drawn. There will be three rounds in which same design will be given to all the team. 4 teams from the 1st round will qualify for the 2nd round and then 2 out of them will reach the 3rd and the final round.

The winner of this event was decided on the correctness time taken to get correct result of the designed structure.

TECHNICAL EVENT: VISIT TO READY MIX CONCRETE (RMC) PLANT AT MOHALI

EVENT CO-ORDINATORS: Jaspreet Singh

GENERAL GUIDELINES: A team of maximum 50 students was allowed.

EVENT DESCRIPTION: The students of BE Civil Third Year were taken for a visit to RMC Plant at Industrial Phase, Mohali. The students were exposed to the step-by-step process of batching and mixing of RMC Concrete. The site engineers gave the students an insight into the various machines used; the travel time and quantity of concrete transported in a transit mixer; and the cost and maintenance of the plant and the mixers.

6. Departmental Achievements

• Papers published in SCI Journals	24	
• Papers published in Non SCI Journals	11	
• Papers published in conferences	15	
• Sponsored Research Projects Ongoing	02	126.6 Lakhs
• Consultancy Projects	9.8 Lakhs	
• Doctoral Degree Awarded	05	
• Visits abroad by faculty members	04	
• Awards and Honors	01	

7. List of ongoing sponsored projects

1. Special Assistance Program (DRS-Phase-III), Structural Health monitoring of RC buildings for earthquakes using guided waves & vibration diagnostics
2. Durability enhancement and prevention of damages in RC structures using bacteria³.

8. List of completed sponsored projects

1. Optimization Techniques for design of Ultra-High Performance Concrete Mixes
2. properties of coal-water slurry flowing through local piping fittings
3. Lateral and longitudinal hydrodynamic dispersion through rigid and flexible vegetation
4. Ultrasonic Guided Wave Approach for monitoring setting and hardening of concrete
5. Detection of Corrosion by Ultrasonic and Acoustic Emission Techniques
6. Investigation of corrosion and its progression

9. Consultancy/Testing assignments completed/ongoing

1. Various Geotechnical Consultancies Projects
2. Design of internal roads for the PUDA for two residential PUDA Projects
3. Design of PQC road for the state highway Patiala-Pehowa road under PIDB scheme as concrete (rigid) overlay over the existing bituminous pavement.
4. Structural material testing
5. Various Geotechnical Consultancies Projects

10. Information regarding foreign visits

1. Dr. R. Siddique visited 14th International Congress on Chemistry of Cement (ICCC2015) as a Keynote Speaker at (ICCC2015) Beijing, China during Oct 13-16, 2015
2. Dr. R. Siddique visited Botswana International University of Science and Technology (BIUST) for Academic purpose at the venue Palapye, Botswana, Jan 20-24, 2016
3. Dr. R. Siddique Visited Northumbria University, New Castle upon Tyne for Academic purposes at University, New Castle upon Tyne (U.K.), during May 10-14, 2016
4. Dr. Sarbjit Singh Visited TCD, Ireland for Academic purposes during october (2015)
5. Dr. Maneeek Kumar Visited Doha (Qatar), Kuwait, Muscat (Oman), Dubai (UAE), Abu Dhabi for India Education Fair during January 2016
6. Dr. Richa Babbar visited University of Groningen, The Netherlands for Workshop on Extracurricular course on Entrepreneurship during Feb 24-March 20, 2016

11. List of Awards and recognitions

Dr. Gurbir Kaur received Thomas Howard Medal- 2015 from Institute of Civil Engineers UK during October 2015

COMPUTER SCIENCE & ENGINEERING DEPARTMENT

The Department of Computer Science and Engineering offers 4-year B.E. programmes, in Computer Science and Engineering. It also offers M.E. in Computer Science and Engineering, Software Engineering, ME Information Security, ME Computer Science and Engineering, ME Software Engineering, M.Tech in Computer Science and Application and MCA. The Department has an active Doctoral programme.

At the undergraduate level, the Department lays emphasis on Software Engineering, Algorithm Analysis and Design, Operating Systems, Computer Graphics, Database and information Systems Engineering and Networking Technologies. The Department provides exposure to emerging technologies as well as futuristic technologies like Cloud computing and High Performance Computing. The research area of the Department is in the field of Software Engineering, Cloud Computing, Theoretical Computer Science, Data Mining, information systems and computer networking.

The Focus of the department is on state of the art projects to be done by our BE and ME students, excellent teaching learning process, better alumni relations, good Industry attachment program through project semester and outcome based education.

1. Academic Programs

- B.E. Computer Engineering
- BE Computer Engineering (Honors in Machine Learning and Data Analytics)
- BE Computer Engineering (Honors in Computer Animation and Gaming)
- ME Computer Science and Engineering
- ME Software Engineering
- ME Information Security
- M. Tech. Computer Science and Applications
- Master of Computer Applications (MCA)
- PhD

2. List of faculty

Professor

S.No	Name	Qualification & Specialization
1.	Dr. R. K. Sharma	PhD, Machine Learning, NLP and Statistical Computing
2.	Dr. Seema Bawa	PhD, M.Tech; Big Data Analytics, Machine Learning, Green Cloud Computing
3.	Dr. Rajesh Kumar	Ph.D., Computer Networks, Cloud Computing, Software Engineering
4.	Dr. Inderveer Chana	PhD, ME(SE), BE(CSE);Specialization: Grid and Cloud Computing; Software Engineering

Associate Professor

S.No	Name	Qualification & Specialization
1	Dr. Maninder Singh	PhD, ME(SE), BE(CE); Specialization: Cyber Physical Systems & Security
2	Dr. A K Verma	PhD; Wireless Networks, Security
3	Dr. Neeraj Kumar	Ph.D.; Computer Networks
4	Dr. Parteek Kumar	PhD, Machine Learning, Natural Language Processing
5	Dr. Rinkle Rani	Ph.D.; Networks, Databases and Algorithms
6	Dr. Shalini Batra	Ph.D., Web Semantics, Machine learning, Probabilistic data structures

Assistant Professor

S.No	Name	Qualification & Specialization
1	Dr. V. P. Singh	Ph.D.; Computing, Computer Networks, Computer Forensics and Cyber Law
2	Dr. Rajiv Kumar	Ph.D.; Component Based Software Development
3	Dr Ajay Kumar	Ph.D., Theoretical Computer Science and Software Testing
4	Dr. Sushma Jain	Ph.D.; Artificial Intelligence, Network architectures, Network protocols and Network algorithms.
5	Mr. Anil Vashistha	B.E. ; Computer Networks, DBMS, System Analysis & Design, Computer System Architecture
6	Dr. Vinod Kr. Bhalla	M.E., Next Generation World Wide Web, Software and its Engineering
7	Mr. Karun Verma	M. E CSE, Pattern Recognition and Soft Computing
8	Dr. Ravinder Kumar	Ph.D. M. Tech., B.E. Combinatorial Optimization, Approximation Algorithm and Mathematical Programming
9	Ms. Ashima Singh	M Tech(CS); Software Engineering
10	Ms. Vineeta Bassi	M.E., B.E., Software Engineering, Object Oriented Programming
11	Mr. Sumit Miglani	M. Tech(IT) Wireless Networking, Programming Languages
12	Mr. Ashish Aggarwal	M. Tech, Operating System, Software Testing
13	Dr. Anju Bala	Ph. D, M. Tech, B.E(CSE); Cloud Computing
14	Mr. Rajkumar Tekchandani	ME (CSE), PhD pursuing, Programming, Software Engineering and Computer Graphics
15	Dr. Maninder Kaur	Ph.D., M. Tech.,; Soft computing

16	Dr. Rupali Bhardwaj	PhD; Multimedia Security, Data Hiding
17	Mr. Vinay Arora	M. Tech. (CSE), Model based testing
18	Dr. Shingara Singh	Ph.D., Image Processing, Information Security
19	Ms. Sunita Grewal	M. Tech., Software Engineering; Software Engineering, Automata Theory, Operating System
20	Dr. Sanmeet Kaur	Ph. D, Network security, Software Engineering
21	Dr. Sharad Saxena	PhD; Network Security, Software Engineering
22	Dr. Ashutosh Mishra	PhD, Software Engineering, Data Mining, Big Data
23	Dr. Damandeep Kaur	PhD (computer Science) , High Performance Computing, Software Engineering
24	Dr. Jhilik Bhattacharya	PhD, Computer Vision & Robotics
25	Dr. Vijay Kumar	PhD, M.Tech., B.Tech.; Metaheuristic Techniques, Data Clustering
26	Dr. Prashant Rana	PhD, Machine Learning, Optimization, Bioinformatics
27	Dr. Raman Singh	Ph.D., Network Security, Intrusion Detection System, Machine Learning
28	Dr. Shreelekha Pandey	PhD; Image Processing, Data-Structures and Algorithms
29	Dr. Karamjit Kaur	PhD (CSE), NoSQL Databases, Big Data, CloudComputing

Lecturers (Ad-hoc)

S.No	Name	Qualification & Specialization
1	Ms. Geeta Kasana	M. Tech, Ph.D. thesis Submitted; Information Security
2	Ms. Palika Chopra	MCA, Ph.D. (Pursuing); Neuro-Computing Techniques
3	Ms. Rupinder Kaur	M.E.(S.E.), Ph.D.(Pursuing), NLP, AI
4	Ms. Sukhchandan Randhawa	M.E., Pursuing Ph. D., Routing in Wireless Sensor Networks, Databases, and Programming Languages
5	Ms. Harkiran Kaur	ME, Ph.D. (Pursuing); Information Retrieval Systems, Intelligent Databases and Machine Learning
6	Mr. Shatrughan Modi	ME (Software Engineering); Software Engineering
7	Ms. Tarunpreet Bhatia	ME (CSE), Pursuing Ph.D., Networks and Information Security
8	Mr. Ashish Girdhar	M.E. (Computer Science & Applications), Pursuing PhD; Data Structure, Soft Computing

9	Ms. Rajanpreet Kaur	M.E. (CSE), Pursuing Ph.D.; Cloud Computing, Distributed System, Security and Trust Evaluation
10	Ms. Anika	M.E.(CSE), pursuing Ph.D.; Data Structures, Algorithms, Recommender Systems, Big Data
11	Dr. Husanbir Singh Pannu	Ph.D., MS, BTech., Machine Learning
12	Dr. Niyati Baliyan (Visiting Assistant Professor)	Ph.D (CSE), M.Tech (ICT),B.Tech (CSE); Semantic Web, Software Engineering, Graph Theory and its Applications
13	Dr. Vishal Sharma	Ph.D.; Computer Networks, Wireless Communications
14	Dr. Avleen Kaur Malhi	Ph.D. (Security of VANETs)
15	Mr. Rahul Amin	M.E. (PhD thesis submitted); Cryptography & Network Security
16	Mr. Shailendra Tiwari	PhD (CSE), IIT(BHU); Bio-Medical Image Processing
17	Dr. Mohd. Naseem	PhD (Mobile Ad Hoc Networks)
18	Dr. Ashok Kumar Pradhan	PhD, Optical Communication and Networks
19	Mr. Ashutosh Aggarwal	M.Tech.(CSE; Digital Image Processing
20	Ms. Sangita Roy	Ph.D.; Cryptography, Steganography, Network Security, Information Security
21	Mr. Gurpal Singh Chhabra	ME, PhD (pursuing: cyber security)
22	Mr. Sukhpal Singh	BE, ME, PhD (submitted); Cloud Computing
23	Dr. Vinay Gautam	Ph.D; Data Warehouse
24	Ms. Seemu Sharma	PhD; Cultural Computing, Human- centered Computing
25	Dr. Tamanna Chhabra	Ph.D.; Algorithms
26	Ms. Shivendra Shivani	PhD(Submitted)
27	Mr. Nitin Saxena	M.Tech (Information Security)

3. Thrust areas of research

- Cyber Physical Systems & Security (Group Lead: Dr. Maninder Singh)
- Language Technologies and Machine Learning (Group Lead: Prof R. K. Sharma)
- Wireless Network and Mobile Computing (Group Lead: Dr. A. K. Verma)
- Fuzzy Based Big Data Analytics (Group Lead: Prof. Seema Bawa)
- Cloud and Software Systems Engineering Group (Group Lead: Dr. Inderveer Channa)
- Pervasive And Adaptive System (PAAS) Research Group (Group lead: Dr. Rajesh Kumar)

4. Brief description of ongoing research activities

- Department has increased the SCI/SCIE publication count to over 200.

- Capstone project has been introduced at BE and ME level and students have been motivated to come with projects which have deliverable components.
- TCD faculty will participate in department research as part of TCD-TU partnership under which TCD faculty will act as co-supervisor in some of the on-going or fresh PhD scholars.

5. Activities round the year (2015-16)

- We are the 1st department in Thapar University where the activities related to the project semester are fully automated. This has been achieved fully in yr. 2014-2015 by IAP coordinator Mr. Vinay Arora and Mr. Mohit Kumar (Student B.E. CSE 2015 batch). Faculty and Industry Co-coordinators can fill the marks of the students online through the designed portal.
- Department has successfully participated in contemporization program with Trinity College Dublin under which 30 students of CSED will complete their BE by staying 2 years in TU and two years in TCD.
- Department has a special cell for Women in Engineering to uplift and enhance the visibility of girl students and faculty in research and academics

6. Departmental Achievements (Pl provide numbers only in this section – details to be provided in subsequent sections)

- Papers published in SCI Journals: 65
- Papers published in Non SCI Journals: 36
- Papers published in conferences: 67
- Sponsored Research Projects New : 5
- Sponsored Research Projects Ongoing : 06 ; 229.77 (in Rs Lakhs)
- Seminar/Conference/Workshop organized: 03
- Short Term courses organized: 02
- Doctoral Degree Awarded: 09
- Lectures by visiting experts: 10
- Visits abroad by faculty members: 07
- Awards and Honors: 02

7. List of ongoing sponsored projects

- 1 Autonomic Resource Prediction and Scheduling for Cloud based Scientific Applications
- 2 Electric vehicle charging station
- 3 Energy Management of the Smart Home Design a Distribution Network for Production Company using Facility Allocation Algorithms
- 4 Tox2020: Toxicity Prediction of pre clinical trial drug using Physicochemical Properties and Machine Learning Approaches

8. List of completed sponsored projects

1. Developing a Grid GIS framework for spatial data
2. Online handwritten Recognition System for Punjabi Language.
3. Green Cloud Computing framework for efficient and robust management
4. Energy Aware Resource
5. Scheduling for Cloud Computing
6. Collaborative Mobility aware Data Dissemination in Vehicular Adhoc Networks
7. Framework for Enabling Data Portability between Heterogeneous Cloud Storage Platforms
8. A Framework for Secure Vehicular Communication Systems
9. Autonomic Resource Prediction and Scheduling for Cloud Based Scientific Applications

9. Consultancy/Testing assignments completed/ongoing

1. Information Security at Desidoc DRDO (CARS), DRDO, New Delhi
2. Network Design and Auditing, Ashoka University

10. Information regarding foreign visits

1. A K Verma visited Trinity College, Dublin for Shadow Professor during October,2015
2. Dr. Neeraj Kumar visited Coventry University, UK for Invited talks during June-July, 2016
3. Dr. Neeraj Kumar visited UTS Sydney, Australia for Paper presentation during Dec. 2015
4. Dr Sanmeet Kaur visited TAU Israel to Attend Cyber Week during June 2016
5. Karun Verma visited University of Groningen, Groningen, The Netherlands University of Twente, Enschede, The Netherlands for Embedding Entrepreneurship in Engineering Education during 22nd Feb-23 Mar, 2016
6. Jhilik Bhattacharya visited TAU, Israel for Collaboration during June,2016
7. Dr. Avleen Kaur Malhi visited 2015 IEEE International Conference on Ubiquitous Computing and Communications. To present paper in IEEE conference during October 2015.
- 8.

11. List of Awards and recognitions

1. Dr. Shalini Batra had Biography selected in World's Who's Who 33rd edition published in year 2016 at Marquis Who's Who during Jan 2016
2. Dr. Sanmeet Kaur had Biography selected in World's Who's Who 33rd edition published in year 2016 at Marquis Who's Who Jan 2016
3. Dr. Avleen Kaur Malhi received Best Poster Award at Grace Hopper Conference during December 2015.

ELECTRICAL & INSTRUMENTATION ENGINEERING DEPARTMENT

In the year 2015-16, the Electrical and Instrumentation Engineering Department has progressed in all directions. The department faculty has published 17 papers in SCI journals of high repute. A new laboratory in the area of renewable energy has been established. The department has received a research and infrastructure development consortium project to the tune of Rs.1.69 crore along with IIT Delhi sponsored from DST. Further, the department has received 3 more research projects sponsored by various agencies like DST, DRDO *etc.* amounting to Rs.58.416 Lakhs. Three new faculty members have joined the department in this year. Mr. Jasdeep Garg, 2016 batch a student of B.E. electrical engineering has scored the highest percentile in the CAT exam held in November 2015.

1. Academic Programs

BE- Electrical Engineering,
BE- Electronics (Instrumentation & Control);
ME – Power System,
ME- Electronics (Instrumentation Control),
ME- Power Electronics & Drives.

2. List of faculty

Professor

S.No	Name	Qualification & Specialization
1.	Dr. Ravinder Agarwal	Ph.D. , Bio-Medical Instrumentation
2.	Dr. Samarjit Ghosh	Ph.D. , Power System

Associate Professor

S.No	Name	Qualification & Specialization
1.	Dr. Mandeep Singh	Ph. D. Bio-Medical Instrumentation
2.	Ms. Manbir Kaur	M.E., Ph.D. (Pursuing) Power System Optimization
3.	Dr. S. K. Jain	Ph. D. Power System
4.	Dr. Sunil Kumar Singla	Ph. D. Biometrics & Image processing

Assistant Professor

S.No	Name	Qualification & Specialization
1.	Dr. Gagandeep Kaur	Ph. D. Artificial Intelligence
2.	Dr. Parag Nijhawan	Ph. D. Power System
3.	Dr. M.D. Singh	Ph. D. Bio-Medical Instrumentation
4.	Ms. Suman Bhullar	M. E., Ph.D. (Pursuing) Power Engineering
5.	Dr. Nitin Narang	Ph. D. Power System
6.	Mr. Nirhowjap Singh	M. E., Ph.D. (Pursuing) Power System Optimization
7.	Mr. Moon Inder Singh	M. E., Ph.D. (Pursuing) Signal Processing
8.	Mr. Shakti Singh	M. E., Ph.D. (Pursuing) Energy Studies
9.	Mr. Souvik Ganguli	M. E., Ph.D. (Pursuing)
10.	Dr. Deepti Mittal	Ph. D. Image Processing
11.	Dr. Sangeeta Kamboj	Ph. D. Signal Processing
12.	Dr. Prasenjit Basak	Ph. D. Power System
13.	Dr. Amrita Sinha	Ph. D. Power System Protection
14.	Dr. Jainy Sachdeva	Ph. D. Biomedical Image Processing
15.	Dr. Santosh Sonar	Ph. D. Power Electronics
16.	Dr. Gyan Ranjan Biswal	Ph. D. Power System and Instrumentation

17.	Dr. Saurabh Bharadwaj	Ph. D. System Identification
18.	Dr. Surya Prakash	Ph. D. Power System
19.	Dr. Mukesh Singh	Ph. D. Power System
20.	Dr. Vishal Srivastava	Ph. D. Instrumentation
21.	Dr. Vikram Chopra	Ph. D. Control System
22.	Dr. (Ms.)Swati Sondhi	Ph. D. Control System
23.	Dr. Mahesh Kumar	Ph. D. Power Electronics
24.	Dr. S. K. Aggarwal	Ph. D. Power System (Joined in July, 2016)

Lecturers (Contractual)

S.No	Name	Qualification & Specialization
1.	Ms. Ruchika	M.E., Ph.D (P). Signal Processing
2.	Mr. Shailesh Kumar	M.Tech., Ph.D (P). Electrical Power System
3.	Ms. Navdeep Kaur	M.E., Ph.D (P). Power System
4.	Mr. Jitender	M.E., Ph.D (P). Power System
5.	Mr. Chandrakant Tiwari	M.E., Ph.D (P). Power Systems
6.	Ms. Amita	M.E., Ph.D (P). Power Engineering

3. Thrust areas of research

Biomedical Instrumentation, Cognitive Engineering, Power System, Electric Drives, Renewable Energy

4. Activities round the year (2015-16)

Four workshops/seminar organized in the department. Ten outside experts have delivered their lectures at EIED,TU. Four faculty members have delivered invited talks.

5. Departmental Achievements

- Papers published in SCI Journals: 17
- Papers published in Non SCI Journals: 07
- Papers published in conferences: 27
- Sponsored Research Projects New: 04 and Rs.227.416 (in Lakhs)
- Sponsored Research Projects Ongoing: 09 and Rs.780.646 (in Lakhs)
- Consultancy Projects: 01 and Rs.0.025 Lakhs
- Seminar/Conference/Workshop organized: 03
- Doctoral Degree Awarded: 05
- Lectures by visiting experts: 06
- Visits abroad by faculty members: 05
- Awards and Honors: 01

6. List of ongoing sponsored projects

1. Particulate matter dose relationship with lung function efficiency of children during ACRB episodes
2. Technical Education Quality Improvement Programme (TEQIP)
3. (PHASE – II): Environment Management and Energy Management
4. Process instrumentation of the state of the art integrated cooling system for large generator in power plants
5. Study and development of SEMG based exoskeleton knee
6. Development of wireless embedded system for health monitoring of ambulatory subjects
7. Feasibility study of the problem locations of photovoltaic system in Patiala distribution network considering smart grid environment
8. Neuro-fuzzy control in interconnected in power system
9. Development of fatigue detection system

10. Electric vehicle charging station as a voltage and frequency regulator, within the real capability of EVs available , in presence of intermittent renewable energy sources

7. Consultancy/Testing assignments completed/ongoing:

Energy Audit for PAT and ECBC : 2016-17 was completed by Dr. Mandeep Singh and the amount generated was Rs 25000/-

8. Information regarding foreign visits

1. Dr. Ravinder Agarwal visited Samara State Aerospace University, Russia for International Conference on Information Technology & Nano-Technology (ITNT 2016) during 17-19 May, 2016
2. Dr. Mukesh Singh visited Education Trade Fair, Bhutan for Promoting University during March, 2016
3. Ms. Manbir Kaur visited Indian Embassy, Jakarta, Indonesia To attend India Incredible Education fair during 6 - 8 March, 2016

9. List of Awards and recognitions

1. Dr. Ravinder Agarwal received Best paper award at 9th International Conference on AdMet- 2016 during February 24-27, 2016



Temperature measurement of a furnace and data acquisition using temperature sensors, RTD, Thermocouples, and LM35

ELECTRONICS & COMMUNICATION ENGINEERING DEPARTMENT

The Department of Electronics and communication Engineering was established in 1975 with the inception of the Institute to cater to undergraduate education in the field of Electronics and communication Engineering. It aims to produce quality professionals in Electronics and communication engineering to compete globally and excel by carrying out basic and applied research in emerging areas by forging strong industry-institute interaction.

Section 1

1. Academic Programs

- B. E. (Electronics and Communication Engineering)
- B. E. (Electronics and Computer Engineering)
- ME (Electronics and Communication)
- ME (Wireless Communication)
- M. Tech (VLSI Design)
- Phd

2. List of faculty

Senior Professor

S.No	Name	Qualification & Specialization
1	Dr. R. S. Kaler	Ph.D Fiber Optical Communication

Professor

S.No	Name	Qualification & Specialization
1.	Dr. A. K. Chatterjee	PhD, M. Tech (Brunel, U.K), M. Sc, B. Sc (Hons.) Semiconductor Electronics, Silicon Carbide Power Semiconductor Devices and Microelectronics
2.	Dr. Rajesh Khanna	PhD, ME and B.E Antenna and Wireless Communications
3.	Dr. Sanjay Sharma	PhD, ME and B.E Wireless Communication, Reconfigurable Computing; Embedded Systems
4.	Dr. Kulbir Singh	PhD, ME and B.E Digital Signal Processing, Fractional Fourier Transform Digital Image Processing

Associate Professor

S.No	Name	Qualification & Specialization
1.	Dr. Alpana Agarwal	PhD, ME, M. Sc and B. Sc VLSI Design, Microelectronics
2.	Dr. Amit Kumar Kohli	Ph.D., M.E., B.E. Wireless Communication and Signal Processing

Assistant Professor

S.No	Name	Qualification & Specialization
1	Dr. Hardeep Singh	PhD, ME and B.E Fibre Optics Communication
2	Mrs. Manu Bansal	PhD (pursuing), ME and B.E VLSI Design
3	Dr. Hem Dutt Joshi	Ph.D.M.E, B.Tech Wireless Communication
4	Dr. Vinay Kumar	PhD, Image & Video Processing
5	Dr. Ajay Kakkar	PhD, M.E. and B. Tech (Wireless Network Security)
6	Dr. Amit Mishra	PhD Wireless Communication and Soft computing
7	Dr. Ashutosh Kumar Singh	PhD Signal Processing
8	Dr. Surbhi Sharma	Ph.D, Wireless Communication & MIMO System
9	Dr. Ravi Kumar	Ph.D, Signal Processing, VLSI Design
10	Dr. Mayank Kumar Rai	Ph.D VLSI Design
11	Dr. Rana Partap Yadav	PhD High Power RF Design and Fabrication
12	Dr. Ankush Kansal	PhD, M.E. (ECE) and Wireless communication
13	Dr. Sanjay Kumar	PhD (Signal Processing), M.Tech. (VLSI De, B.E. (ECE)
14	Dr. Rishikesh Pandey	Ph. D. (VLSI Design)
15	Dr. Anil Arora	Ph.D. (Micro-electro Mechanical Systems)
16	Dr. Karamjit Singh Sandha	PhD, M.Tech in ECE, VLSI Interconnect, Embedded Systems
17	Dr. Neeru Jindal	Ph.D Image and Video Processing, M.Tech. (ECE), B.E. (ECE)
18	Ms. Harpreet Vohra	M.Tech (VLSI Design)
19	Ms. Amanpreet Kaur-I	M.E.(Wireless Communication) Antennas and Wireless Communications
20	Mr. Arun Kumar Chatterjee	VLSI Design, Nanoscale MOSFET (S.C. Devices)
21	Ms. Amanpreet Kaur-II	MTech Pursuing PhD. Signal processing and wireless network
22	Ms. Sakshi	M. Tech(VLSI Design), Pursuing Phd Digital VLSI Design
23	Dr. Urvinder Singh	PhD, M. Tech, B. Tech, Soft Computing and Antenna
24	Dr. Jaswinder Kaur	Ph.D (Microstrip Antenna Design)
25	Dr. Mohit Agarwal	PhD. Microelectronics
26	Dr. Rahul Upadhyay	PhD
27	Dr. Ravi Panwar	PhD
28	Dr. Amit Munjal	PhD, M. Tech, B.E, Networks
29	Dr. Pankaj Arora	PhD, MS, BTech, Microelectronics and photonics

Lecturers (Ad-hoc)

S.No	Name	Qualification & Specialization
1	Mr. Sukhwinder Kumar	B.Tech, ME(ECE), PhD(Pursuing) (Embedded system and signal processing)
2	Mr. Gangandeep Singh	M. Tech, VLSI design
3	Ms. Gaganpreet Kaur	M. Tech
4	Ms. Madhu Kushwaha	M. Tech
5	Dr. Sumit Vyas	PhD
6	Mr. Navneet Sharma	M. Tech
7	Ms. Geetika Dua	M. Tech

3. Thrust areas of research

Antenna

- Microstrip antennas for next generation wireless communication systems
- Multi-banding of antenna

Nano Devices

- Nanophotonic Devices
- Optical MEMS/NEMS
- Hybrid Nano Devices
- Carbon Nano Tube based VLSI Interconnects
- Modeling and design of CNT based interconnects for next generation VLSI design
- CNT based FET

Optical fiber communication

- WDM systems

Signal Processing

- Fractional Signal Processing
- Image Processing

VLSI System and Circuit design synthesis

- VLSI Signal Processing
- Digital VLSI Design

Wireless Communication

- MIMO Communication Systems
- Fractional Fourier Transform based Communication Systems
- Coding for wireless systems
- MIMO OFDM

4. Brief description of ongoing research activities (with pictures of key experimental setups or equipment)

Department of ECED is very active in research in the thrust areas mentioned above. Department has a wireless communication lab in which industry standard equipments like vector signal generator, spectrum analyzer and vector network analyzer are procured for carrying out latest research. Department was funded by Special Manpower development programme (SMDP) VLSI chips to system design with a funding of 1.25 crore.

5. Activities round the year (2015-16)

Department has an International Engineering Program (BE Electronics and Communication Engineering) in Collaborated with Trinity College Dublin, Ireland. Our students are doing very well in academics at TCD.

6. Departmental Achievements (Pl provide numbers only in this section – details to be provided in subsequent sections)

- Papers published in SCI Journals:35

- Papers published in Non SCI Journals:8
- Papers published in conferences:8
- Sponsored Research Projects New : 4 , Rs. 203 lakhs
- Seminar/Conference/Workshop organized: 1
- Visits abroad by faculty members: 5

7. List of ongoing sponsored projects

1. SMDP VLSI Chips to System Design
2. Design and development of the plasma
3. column for the study plasma antenna and switches
4. Design and development of the
5. Reconfigurable Plasma Antenna
6. Design and Development of load resilient mock-up
7. ICRH system of Tokamak with variable load

8. Information regarding foreign visits

1. Dr. Vinay Verma visited University of Groningen, Netherlands for Entrepreneurship workshop during 2016
2. Dr. R.S. Kaler and Dr. Alpana Agarwal visited Trinity College, Dublin for Contemporization Program during Oct. 5 to Oct.30, 2015
3. Ms. Amanpreet Kaur visited Bali Indonesia for APCAP 2015 (Conference) during 30th June to 4th July 2015
4. Hardeep Singh visited SPIE For Research Paper Presentation in Symposium (at San Diego Convention Center), USA during August 9-13, 2015



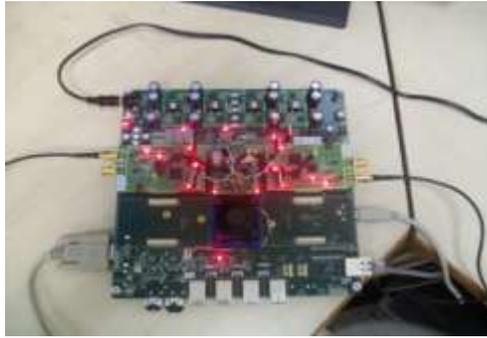
Vector Network Analyzer 9.5 KHz to 8.5 GHz



Anechoic chamber for antenna testing



Vector Signal generator and Spectrum Analyser



WARP MIMO BOARD



Warp MIMO Test bed

MECHANICAL ENGINEERING DEPARTMENT

Section 1

1. Academic Programs

The Department of Mechanical Engineering was established in 1956 with the inception of the Institute to produce high quality engineers the field of Mechanical Engineering to cater the needs of the newly Independent India. Since the Institute became a Deemed University in 1985, the department has increasingly focused on post graduate education and research. The Department offers undergraduate programs leading to B.E. Mechanical Engineering, B.E. Mechatronics Engineering and B.E. Mechanical (Production) Engineering, Postgraduate programs leading to M.E. (CAD/CAM & Robotics), M.E. (Production & Industrial Engineering), M.E. (Thermal Engineering), and Doctoral program leading to PhD Degree. The department also runs a BE-MBA dual degree program in collaboration with LMTSOM, Derabassi campus. The Department aims to produce quality professionals in Mechanical Engineering to compete globally and excel by carrying out basic and applied research in emerging areas by forging strong industry - institute interaction. In January 2008, the undergraduate program of Mechanical Engineering Department had been accredited for 5 years by NBA and now same has been applied for re-accreditation. Onsite visit of accreditation by ABET has been successfully completed during December 9-11, 2015 and the programme is accredited for six years.

The Department is also notable for its laurels in international forums like Society of Automobile Engineers (SAE) Formula Students. Team FATEH, Thapar University had participated in the international event Formula student UK 2015, held from 8th July to 12th July 2015. The event was held at Silverstone Circuit, Northamptonshire, London, UK. The team secured the overall rank of 63rd. Team Ultron Sports had participated in Mega ATV Championship 2016, held from 4th-8th March 2016 and secured an overall rank of 35. The event was organized at Bhubaneswar, by Autosports India.

2. List of faculty

Senior Professor

S.No.	Name	Qualification & Specialization
1	Dr. S. K. Mohapatra	Ph.D. (Thermal Engineering)

Professor

S.No.	Name	Qualification & Specialization
1	Dr. Ajay Batish	Ph.D. (Industrial Engineering)

Associate Professor

S. No.	Name	Qualification & Specialization
1	Mr. A. S. Jawanda	M.E. (Incl. Engg, CAD CAM)
2	Mr. Sumit Sharma	M.E. (Turbo Machinery)
3	Mr. S. S. Bhullar	M.E. (Industrial Engineering)
4	Dr. Vinod Kumar Singla	Ph.D.(Non-traditional Machining Methods)
5	Dr. Tarun Kumar Bera	Ph.D. (Vehicle Dynamics and Robotics)
6	Dr. S. S. Mallick	Ph.D. (Thermal Engineering)

Assistant Professor

S. No.	Name	Qualification & Specialization
1.	Dr. Sandeep Sharma	Ph.D. (CAD CAM & Robotics)
2.	Dr. Tarun Nanda	Ph.D. (Industrial Engineering)
3.	Dr. J. S. Saini	Ph.D. (CAD)
4.	Dr. Ravinder Kumar Duvedi	M.E. (CAD CAM & Robotics)

5.	Dr. Satish Kumar	Ph.D. (Thermal Engineering)
6.	Mr. Kishore Khanna	M.E. (CAD CAM & Robotics)
7.	Mr. Devender Kumar	M.Tech. (Robotics & Automation)
8.	Mr. Kundal Lal	M.E. (Thermal Engineering)
9.	Mr. Bikramjit Sharma	M.E. (CAD CAM & Robotics)
10.	Mr. Daljeet Singh	M.E. (CAD CAM & Robotics)
11.	Dr. Ashish Singla	Ph.D. (Robotics)
12.	Dr. Madhup Kumar Mittal	Ph.D. (Refrigeration, two-phase flow, solar thermal system)
13.	Dr. Vivek Jain	Ph.D. (Machining Science)
14.	Dr. Dheeraj Gupta	Ph.D. (Machining Science)
15.	Dr. Anant Kumar Singh	Ph.D. (Production Engineering)
16.	Dr. Hira Lal Bhowmik	Ph.D. (Production Engineering/Tribology)
17.	Dr. Vineet Srivastava	Ph.D. (Production Engineering)
18.	Dr. Vikrant Khullar	Ph.D. (Thermal Engineering)
19.	Dr. Neeraj Grover	Ph.D. (Computer Structure and F.E. Analysis)
20.	Dr. Neeraj Kumar	Ph.D. (Design)
21.	Dr. Deepak Jain	Ph.D. (Machine Design, Finite Element Analysis)
22.	Dr. S. S. Ragit	Ph.D. (I. C. Engine)
23.	Dr. Karanvir Saini	Ph.D. (Machine Design)

Visiting Assistant Professor

S. No.	Name	Qualification & Specialization
1.	Dr. Ashish Purohit	Ph.D. (Machine Design)
2.	Mr. Gulshan Kumar	Ph.D. pursuing (Metallurgy and Materials)
3.	Mr. Sandeep Kumar	Ph.D. pursuing (Thermal Engineering)
4.	Dr. Gagandeep Bhardwaj	Ph.D. (Machine Design)

Lecturers (Ad-hoc)

S. No.	Name	Qualification & Specialization
1.	Mr. Atul Sharma	M.E.(Production Engineering)
2.	Mr. Gurpreet S. Saini	M.E. (Production Engineering)
3.	Dr. Anu Mittal	Ph.D. (Thermal Engineering)
4.	Mr. Harshavardhana Natrajan	M.E. (Manufacturing)
5.	Dr. Atanu Das	Ph.D. (Manufacturing)
6.	Mr. Rohit Kumar Singla	M.E. (Thermal Engineering)
7.	Dr. Deepa Modgul	Ph.D. (Material Engineering)

3. Thrust areas of research

The department of mechanical engineering is rich in research resources and offers doctoral program leading to Ph.D. degree. The major thrust areas of research are thermo-mechanical engineering, biomass gasification, solar thermal energy, fluidized bed combustion, alternate fuels, bulk solids storage and transportation, micromachining, polymer nano-composites, vibration and noise engineering, biomechanics, structural and aeroelastic analysis, vehicle dynamics, robotics, industrial automation, exoskeleton.

4. Brief description of ongoing research activities

In the academic year 2015-16 the faculties of mechanical engineering department have actively participated in number of research and development activities. Department has published total 42

papers in various reputed SCI journals. A number of research projects of worth 67.8 Lakhs have been bagged from the reputed funding agencies as DST, CSIR. Following are the highlights of ongoing research in the department.

- Experimental Investigation and CFD modeling of slurry pipeline for flow of multi-particulate slurry at higher concentrations.
- Design and development of a novel honing type magneto-rheological finishing process. Development of Floating wick basin type vertical multiple effect diffusion solar still with waste heat recovery
- Research in the newly emerging area of role of nano-fluids in the performance of solar collector is initiated in the department.
- Five PhD dissertations have been awarded in year 2015-16 and, it is to inform, that Dr. R. K. Duvedi's doctoral thesis is nominated to confer a prestigious INAE award in 2016-17.
- Numbers of expert lectures have been organized for the student.

5. Activities round the year

- Onsite visit of ABET team during Dec 09-11 2015.
- NAAC team visited during May 3-7, 2016.
- 3rd and 4th year UG curriculums and all PG curriculums are revised as per feedback given by the TCD during academic review in Jan 2016.
- Project semester monitoring guideline and evaluation scheme have completely redesigned and implemented.
- Process of BOE as per the TCD guideline is implemented.
- A one-day workshops as "Punj-Robotics" (May, 2016) and a two-day workshop on "Recent Trends in Vehicle Dynamics (RTVD)" (Feb, 2016) are organized.
- Prof. Sanjeev Bedi, University of Waterloo, Canada visited Mechanical Engineering department in May 2016.
- A team of faculties from university of Groningen, Netherlands has visited the department.
- A number of department faculties have visited abroad for various academic activity/conferences etc.
- Various teams of mechanical engineering students participated in the different events organized at the National and International Levels, viz., team FATEH North amptonshire UK, team Ultron Sports at Bhubaneswar, etc.

6. Departmental Achievements

- Papers published in SCI Journals: 42
- Papers published in Non SCI Journals: 16
- Papers published in conferences: 17
- Sponsored Research Projects New: 03 Projects worth Rs 67.8 Lakhs
- Sponsored Research Projects Ongoing: 07 projects worth Rs 96.16 Lakhs
- Consultancy Projects: 02 projects worth Rs 5.33 Lakhs
- Patent Filed: 02(filed)
- Seminar/Conference/Workshop organized: 02
- Doctoral Degree Awarded: 05
- Lectures by visiting experts: 06
- Visits abroad by faculty members: 04
- Awards and Honors: 01

7. List of ongoing sponsored projects

1. Experimental Investigation and CFD modelling of slurry pipeline for flow of multiparticulate slurry at higher concentrations
2. DST-FIST
3. Design and Development of a Novel Honing Type Magnetorheological Finishing Process

4. Development of Metallic Nano-Composite Cladding on Poor Tribo Characteristics Metallic Substrate through Microwave Heating
5. “Simulation and Analysis of Flow Through Micro-channels Fabricated Using Ultrasonic Micro-Machining”
6. Improvement of part quality by controlling Shrinkage and Surface Roughness in 3D Printing
7. Floating wick basin type vertical multiple effect diffusion solar still with waste heat recovery

8. List of completed sponsored projects

1. Improved Magnetorheological Finishing Process
2. Developing Validated Scale-up Procedure for Dense-Phase Pneumatic Transport of Fine Powders using Two-Layer Dune-Flow Model
3. Behaviour of functionalized solid lubricants in metal-metal tribo-contact
4. Evaluation of resistance properties of coal-water slurry flowing through local piping fittings

9. Consultancy/Testing assignments completed/ongoing

1. Feasibility Study of Fly Ash Handling System in Rosa Thermal Power Plant was completed by by Dr. S.S.Mallick, Mr. Mr. Atul Sharma, Mr. Gautam Setia for the amount of Rs 4.25 Lakhs
2. Characterization and Investigation into Fluidization and Deaeration Properties of Fly Ash by Dr. S.S.Mallick, Mr. Atul Sharma, Mr. Gautam Setia for Rs. 1.08 Lakhs

10. Information regarding foreign visits

1. S. K. Mohapatra visited Houston (USA) for IMECE 2015 during 13-19 November 2015.
2. A S Jawanda visited Trinity College Dublin, University of Dublin, Ireland for Harmonisation of TU MED year 1 and 2 courses, specially design project based courses. Review of year 3 and 4 courses of MED TU by concerned TCD faculty during weeks October 5-30, 2015.
3. Dr. Vineet Srivastava visited University of Groningen, The Netherlands To develop a course on entrepreneurship and create a Venture Lab for entrepreneurship during 23rd February, 2016 to 21st March, 2016.
4. Sandeep Kumar Sharma visited University Of Waterloo for Post Doctoral Fellowship during May-Aug 2016.

11. List of Awards and recognitions

Sandeep Sharma received Fellowship for post-doctoral work at University of Waterloo during May 2016





Punj-Robotics workshop



RTVD workshop



**Lecture from Prof. Sanjeev Bedi,
University of Waterloo, Canada**



**Visit of faculties of university of
Groningen, Netherlands**

SCHOOLS

SCHOOL OF HUMANITIES AND SOCIAL SCIENCES

SCHOOL OF CHEMISTRY & BIOCHEMISTRY

SCHOOL OF ENERGY AND ENVIRONMENT

SCHOOL OF MATHEMATICS AND COMPUTER APPLICATIONS

SCHOOL OF PHYSICS & MATERIAL SCIENCE

L.M. THAPAR SCHOOL OF MANAGEMENT

SCHOOL OF HUMANITIES AND SOCIAL SCIENCES

Section 1

1. Academic Programs

The School of Humanities and Social Science offers M.A in Psychology and Economics and also offers Doctoral Programs leading to Ph. D Degree. The School also offers various Core and Elective courses in the area of Humanities & Social Sciences and management to Undergraduate and Postgraduate students of Engineering and Sciences. These courses are aimed at promoting Holistic development of students and to instill ethical values in them.

2. List of faculty

Professor

S.No.	Name	Qualification & Specialization
1.	Dr (Ms) Santha Kumari	Ph.D. Cognitive and Experimental Psychology.
2.	Dr (Ms) Ravi Kiran	M Phil. Ph.D. Industrial Management, E- Business, Business Environment

Assistant Professor

S.No.	Name	Qualification & Specialization
1.	Dr. (Ms) Gurvinder Kaur	MBA(HR), M.A (Econ), pursuing Ph.D HRD, Entrepreneurship, Communication Skills. Ph.D.
2.	Dr. (Ms.) Hitashi Lomash	Ph.D. Guidance and Counseling, Clinical Psychology Organizational Behavior.
3.	Mr. Apurva Bakshi	MBA, pursuing Ph D IPR, Operations Management, Strategic Management
4.	Mr. Subhash Chandra Bose	MBA, pursuing Ph. D Marketing and Quality Management
5.	Dr. A.N. Sah	MA Economics, Ph.D. Economics and Research methodology.
6.	Dr. Rakesh Kumar Sharma	M.Com, MBA, Ph.D. Finance and Banking.
7.	Dr. (Ms.) Simerpreet Ahuja	Ph. D, M. A (Psychology) Child Development & Counseling
8.	Dr. (Ms) Diksha Sharma	Ph.D. M.A(English) English literature and Comm. Skill.

Lecturers (Ad-hoc)

S.No.	Name	Qualification & Specialization
1.	Dr. (Ms) Anupam Sharma	MBA, Ph.D.,HRD,IPR.
2.	Ms. Navdeep Dhillon	M. Phil, Pursuing Ph. D. Comm. Skill
3.	Dr Deler Singh	Ph.D (English Literature)
4.	Ms. Sheena Chhabra	MBA, Pursuing Ph. D.
5.	Dr(Ms) Kuldeep Walia	Ph.D, (Economics)

3. Thrust areas of research:

Cognitive, Experimental and neuropsychology, Economics, Finance, Industrial Management, IPRs in Manufacturing, Knowledge Management, Human Resource Management, Communication skills, English literature, Guidance and Counseling, Clinical Psychology, Organizational Behavior.

4. Departmental Achievements

• Papers published in SCI Journals	:	07
• Papers published in Non SCI Journals	:	13
• Papers published in conferences	:	06
• Sponsored Research Projects Completed	:	03

5. List of completed sponsored projects

1. A strategic framework for consumer preferences towards emerging retail formats
2. A strategic framework for enhancing technology adoption and management strategies for women entrepreneurs in food and beverage sector.
3. An experimental investigation of the psychological determinants of financial decision making: A prospect theory approach

6. Information regarding foreign visits

Ravi Kiran visited Canadian House of City Universitaire de Paris for Session Chair and Invited talk during 25-26 November, 2015



Ethics & IPR Workshop, September 2014 faculty



Trinity college Dublin faculty with SHSS

SCHOOL OF CHEMISTRY & BIOCHEMISTRY

School of Chemistry & Biochemistry (SCBC) is unique school of learning and fostering innovative scientific ideas through interdisciplinary teaching and research in frontal areas of the chemical sciences. Faculty members are actively involved in frontier areas of research and having sponsored projects worth Rs. 552.00 (Lakhs). The faculty members of School have published 51 research papers in SCI/high Impact factor journals during 2014-15. School feels proud in welcoming Dr. Rajendra Singh Dhayal who has joined as Assistant Professor in this academic year.

Section 1

1. Academic Programs

M.Sc. (Biochemistry)

M.Sc. (Chemistry)

Ph.D. (Chemistry)

2. List of faculty

Senior Professor

S.No	Name	Qualification & Specialization
1.	Dr. Susheel Mittal	Ph.D., Chemical Sensors, Biosensors, Inorganic Ion Exchange Materials, Environmental Chemistry

Professor

S.No	Name	Qualification & Specialization
1.	Dr. Bonamali Pal	Ph.D., Physical & Nanomaterial Chemistry, Photocatalysis, Photoelectrochemistry

Associate Professor

S.No.	Name	Qualification & Specialization
1.	Dr. Satnam Singh	Ph.D., Organic Chemistry and Environmental Chemistry
2.	Dr. (Mrs.) Ranjana Prakash	Ph.D., Applied Chemistry
3.	Dr. Amjad Ali	Ph.D., Inorganic Chemistry
4.	Dr. Manmohan Chhibber,	Ph.D., Synthetic Organic Chemistry, Medicinal Chemistry
5.	Dr. Rajesh Kumar	Ph.D., Biophysical and Bioinorganic Chemistry

Assistant Professor

S.No	Name	Qualification & Specialization
1.	Dr. Kamaldeep Paul	Ph.D., Organic and Medicinal Chemistry
2.	Dr. Satyendra Kumar Pandey	Ph.D., Organic Synthesis and Medicinal Chemistry
3.	Dr. Vijay Luxami	Ph. D., Organic and Supramolecular Chemistry, Molecular Electronics
4.	Dr. Soumen Basu	Synthesis & Applications of Nanomaterials
5.	Dr. Rajendra Singh Dhayal	Ph.D. Inorganic /Organometallic Chemistry

3. Thrust areas of research:

Electrochemical sensor, Biosensors for heavy metal ions, pesticides using whole cells, Nanoscale materials & Photocatalysis, Heterogeneous & Bio-catalysis, Biophysical chemistry, Medicinal & Pharmaceuticals, Organic and Inorganic chemistry, Biochemistry and Protein chemistry.

4. Brief description of ongoing research activities (with pictures of key experimental setups or equipment):

Research areas of School include basic chemistry, nanomaterial and photocatalysis, electroanalytical chemistry and sensors, heterogeneous and bio-catalysis, biophysical studies, new drug molecules, organic synthesis, biochemistry and environment science. One of the main aim of the school is to facilitate an integrated, multidisciplinary approach for the development of chemical and catalysis science leading to new products and processes.

5. Activities round the year (2015-16):

Along with regular teaching with excellent SRS scores, School has published 51 SCI research papers in high Impact Journals. Faculty members have attended various conferences and delivered many invited talks at different prestigious institutes in India. Dr. Mandeep Singh Bakshi, Lecturer, Department of Chemistry, Wilfrid Laurier University, Waterloo (Canada) has delivered Expert Lecture talk on "Biomineralization of Biomaterials: Biological Applications and Nanotoxicology" on 11th May, 2015. National Science Day was organized by the School on 28th February, 2015 and Dr. Sanjay Sen Gupta, Principal Scientist & Editor JSIR, NISCAIR, CSIR, New Delhi, delivered a talk on "NISCAIR activities, writing scientific papers and science communication" followed by expert talk by Dr. Narinder Singh, Head, Chemistry Department, IIT Ropar. Thirteen students were awarded Ph.D. degree and eight students completed their M.Sc. with good positions. Dr. Satnam Singh of the School chaired a technical session in International conference, "Advances in Functional Materials" held at Stony Brook University, New York, USA from June 29 to July 3, 2015. Some students have qualified CSIR-JRF NET and GATE examinations and joined Ph.D. program at reputed institutes. Currently, the school has 26 sponsored research projects in which many Ph.D. students are working and getting their fellowship.

6. Departmental Achievements (Pl provide numbers only in this section – details to be provided in subsequent sections)

- Papers published in SCI Journals : 51
- Papers published in Non SCI Journals : 02
- Sponsored Research Projects New 2015 : 05 Projects (Rs. 188 Lakhs)
- Sponsored Research Projects Ongoing : 26 Projects (Rs. 552 Lakhs)
- Patent (Filed/Granted) : 1 Filed US Patent
- Seminar/Conference/Workshop organized : 1
- Doctoral Degree Awarded : 13
- Lectures by visiting experts : 4
- Visits abroad by faculty members : 3

7. List of ongoing sponsored projects

1. Design and Development of Diphenylether based Supramolecules for Electroanalytical Probes
2. Particulate matter dose relationship with lung function efficiency of children during agricultural crop residue burning episodes
3. Modelling Atmospheric Pollution and Networking (MAPAN) – Patiala (MAPAN – 08)
4. Size and shape dependent photo catalytic activity of silica-coated metal (M)-Zinc sulfide (ZnS) nanocomposites for nitroaromatics reduction
5. Size and Shape Dependent Photocatalytic Activity of TiO₂ nanostructures for Selective Reduction of Nitroaromatics
6. "Study of surface charge and Zeta potential of coinage metal nanoparticles for their optimum stability and catalytic activity"
7. "Synthesis of transition metal incorporated mesoporous materials and their catalytic application for some industrial reactions
8. Fungus mediated biodiesel generation from waste edible oils
9. Strain improvement of *Aspergillus* sp. for enhanced trans esterification of waste cooking and non-edible oils using induced mutation by γ irradiation
10. Biofortification of Selenium in Edible Mushrooms from Se-rich Crop Residues

11. Mixed metal oxides as heterogeneous catalysts for the triacetin synthesis
12. Synthesis and characterization of diphenyl ether/analogue for their antibacterial activity
13. Kinetic and Thermodynamic Studies of the Effects of Synergistic and Nonsynergistic Anions on Blood Plasma Transferrin. (July 2015-July 2017). *(equipment sanctioned Circular Dichroism (CD) spectrometer)
14. The Mechanism of Reductive Release of Iron from Serum Transferrin, sanctioned by ICMR (March 2015-2017. *(equipment sanctioned millisecond stopped flow spectrometer)
15. The Role of Macromolecular Crowding on Structure, Function, Stability and Folding of Serum Transferrin. Approved by DBT (Extra Mural Research Scheme) 2015-2017. *(equipment sanctioned fast protein liquid chromatography (FPLC)).
16. Sugars and Salts-Induced Folding and Stabilization of Base-Denatured Horse Cytochrome c (Approved by ICMR (2015-2017)).
17. Hybrids of Substituted Benzimidazole and Quinazoline /purine/pyrazolo pyrimidine analogue as Antituberculosis and Antimalarial activity.
18. Coupling of Substituted Quinazoline /Xanthine and Purine/Pyrimidine/ Benzimidazole : A Novel Scaffold for Kinase Inhibitors
19. Heterocyclic Substituted Quinazoline and Pyrazolo[3,4-d]pyrimidine Derivatives: Novel Scaffold for Aurora Kinase Inhibitors
20. Novel Scaffolds of P-glycoprotein Modulators to Overcome Multidrug Resistance in Cancer cells
21. The Total Synthesis of the Antimalarial Natural Products, Flinderoles
22. Concise and Protecting Group-Free Synthesis of 2-Alkyl-Substituted Tetrahydroquinolines
23. Heterocycles based FRET-dyads for chemionics and bioionics. (2011-2014) - DST-FAST TRACK-27 Lakhs
24. ESIPT based Chromophores: Applications for Sensing and White light emitting devices

8. List of completed sponsored projects

1. Preparation of Core-Shell Structure of Silica (SiO₂)-Coated Cadmium Sulfide (CdS) Nanocomposites by Size-Selective Photoetching and Study of Photocatalytic Organic Syntheses Reactions.
2. Zirconia supported solid catalyst for simultaneous transesterification and esterification of high free fatty acid containing triglycerides
3. Alkali metal supported transition metal oxides as solid catalyst for the transesterification of jatropha and karanja oils
4. Kinetic and thermodynamics studies on the effect of chaotropic and kosmotropic cosolvents on horse ferrocycytochrome
5. The Kinetics and Mechanism of Iron Release from Transferrins
6. pH-Dependent stability and microsecond folding kinetics of horse ferrocycytochrome-C.
7. Hybrids of Substituted Benzimidazole and Quinazoline /purine/pyrazolo pyrimidine analogue as Antituberculosis and Antimalarial activity

9. Information regarding foreign visits

1. Dr. Satnam Singh visited as Chaired technical session in International conference, "Advances in Functional Materials" held at Stony Brook University, New York, USA for Research during June 29 to July 3, 2015.
2. Dr. Kamaldeep Paul visited 15th tetrahedron conference-Asian Edition: Challenges in Bioorganic and Medicinal Chemistry, Singapore EXPO, Singapore for Conference during Oct 28-31, 2014
3. Dr. Vijay Luxami visited 15th tetrahedron conference-Asian Edition: Challenges in Bioorganic and Medicinal Chemistry, Singapore EXPO, Singapore for Conference during Oct 28-31, 2014



Spectrofluorimeter

TGA (Thermo Gravimetric Analyzer)

SCHOOL OF ENERGY & ENVIRONMENT

Section 1

1. Academic Programs

M.Tech. Environmental Science and Technology

M.Tech Program in Energy Technology and Management

Ph.D. programs in the energy, environment and safety areas

2. List of faculty

Professor

S.No.	Name	Qualification & Specialization
1.	N.Tejo Prakash	Ph.D, Metal Biotransformations
2.	A S Reddy	Ph.D, Environmental Technology & Management

Associate Professor

S.No.	Name	Qualification & Specialization
1.	Anita Rajor	Ph.D , Environmental Microbiology & Bioremediation
2.	Anita Rajor	Ph.D , Environmental Microbiology & Bioremediation

Assistant Professor

S.No.	Name	Qualification & Specialization
1.	Babu, KS	M.Tech, Water and Wastewater Treatment Engineering
2.	Anoop Verma	Ph.D, Chemical & Biochemical Engineering Processes; AOP based treatment Technologies
3.	Venkatasubramanian, A	Ph.D, Solid Oxide Fuel Cells

3. Thrust areas of research

- Environmental Management
- Energy Management
- Water and Wastewater Treatment
- Solid Oxide Fuel Cells
- Bioenergy and Hydrogen Generation
- Bioremediation
- Metal bioaccessibility and Bioactivity

4. Brief description of ongoing research activities (with pictures of key experimental setups or equipment)

HPLC, TOC analyzer, Energy Monitoring Equipment, Biodiesel generation and testing apparatus, air quality monitoring equipment.

5. Departmental Achievements

- Papers published in SCI Journals : 17
- Papers published in Non SCI Journals : 02
- Papers published in conferences : 02
- Sponsored Research Projects Ongoing : 01 (Rs 24.9 Lakhs)
- Consultancy Projects : 07 (Rs 1.4 Cr.)

- Visits abroad by faculty members : 01
- Lecturer by visiting expert : 01

6. List of ongoing sponsored projects

Applications of ionizing radiation in AOP based degradation of persistent pollutants from aqueous streams

7. List of completed sponsored projects

1. Influence of bacteria on compressive strength and permeability of fly ash concrete
2. Utilization of cement kiln dust in concrete after removal of alkalinity and metal toxicity with microbes.
3. Utilization of Fungal treated waste foundry sand concrete
4. Bioprospecting for *Muscodor* spp. industrially important endophytic genus in India
5. A Development of biodegradable polymeric blends for packaging applications
6. Studies on Biodegradation of Plastics
7. Toxicity studies of the distillery effluent treated with fungus
8. Polishing of distillery waste treated by fungal assay
9. Feasibility study on the use of steel melting furnace slag/APCD dust as filler in the manufacture of fly ash bricks/Blocks

8. Consultancy/Testing assignments completed/ongoing

Projects on EIA Study and Air Quality Modeling by Amit Dhir for amount Rs. 3.1Lakhs.

SCHOOL OF MATHEMATICS AND COMPUTER APPLICATIONS

School of Mathematics (SoM) contributes to the mission of the University by providing mathematics majors to other engineering department and schools and also run own courses of PG level M.Sc. and Ph.D. SoM seeks to provide the students with experiences that will assist them in defining their career objectives. The faculty of SoM is committed for maintaining the high standards of teaching and research in mathematics and its applications. The School is committed to provide quality teaching with modern infrastructure and syllabus. Our syllabus is as per the international standards and relevant to industrial applications. For production of quality manpower, it is necessary to work at the cutting edge of the science and technology as well as research and development. The modern era also require the various applications of mathematics in modern industries. The faculty of the School is well qualified and their research is as per international standards in the areas of both pure as well as applied Mathematics. From time to time School also invited various expertise to deliver their lectures.

During the period: 1st July 2015 to 30th June 2016, the faculty of the School:

- Has published 36 SCI papers and 8 Non SCI (referred) journals.
- Completed 10 Ph.D. theses have been completed and 35 Ph.D thesis are ongoing.
- 20 M.Sc. thesis have also been guided by the various faculty of the School.

1. Academic Programs

The school offers PG programme M.Sc. in Mathematics and Computing (Regular mode). School also offers doctoral programme in Mathematics leading to PhD degree. Further school is also engaged in imparting instructions in core courses on Mathematics to UG and PG students of the University.

2. List of faculty

Professor

S.No	Name	Qualification	Specialization
1	Dr. S.S. Bhatia	Ph.D.	Functional Analysis

Associate Professor

S.No	Name	Qualification	Specialization
1.	Dr. Arvind Kumar Lal	Ph.D.	Theoretical Astrophysics/Reliability/ Numerical Analysis
2.	Dr. M K Sharma	Ph.D.	Theoretical Astrophysics, Optimization Techniques
3.	Dr. Deepak Gumber	Ph.D.	Algebra
4.	Dr. Amit Kumar	Ph.D.	Fuzzy Reliability Analysis, Fuzz Optimization, Numerical Analysis, Optimization

Assistant Professors

S.No	Name	Qualification	Qualification & Specialization
1.	Dr. Meenakshi Rana	Ph.D	Partition Theory, Number Theory
2.	Dr. Satish Kumar	Ph.D.	Mechanics
3.	Dr. Ankush Pathania	Ph.D.	Astro Physics
4.	Dr Jatinderdeep Kaur	Ph.D.	Fourier Analysis /Functional Analysis
5.	Dr. Vivek	Ph.D.	Numerical Analysis, Finite Elemer Analysis
6.	Dr. Sanjeev Kumar	Ph.D,	Numerical Analysis

7.	Dr. Paramjeet Singh	Ph.D.	Numerical Analysis of PDE
8.	Dr. Vikas Sharma	Ph.D.	Operation Research /Mathematical Programming
9.	Dr. Harish Garg	Ph.D.	Reliability, Evolutionary Algorithm, Fuzzy Set Theory
10.	Dr. Sapna Sharma	Ph.D.	Discontinuous Galerkin Method, Computational Fluid Dynamics, Finite Element Method
11.	Dr. Hemant Kalra	Ph.D.	Algebra, Group Theory
12.	Dr. Sumit Chandok	Ph.D.	Fixed Point Theory, Approximation Theory
13.	Dr. Kavita	Ph.D.	Applied Wavelet In P.D.E
14.	Dr. Raj Nandkeolyar	Ph.D.	Fluid Mechanics
15.	Dr. Kuldeep Kaur	Ph.D.	Algebra
16.	Dr. Parimita Roy	Ph.D.	Mathematical Biology, Non-linear Dynamic

Lecturers (Contractual)

S.No.	Name	Qualification	Specialization
1.	Dr. Navdeep Kailey	Ph.D.	Duality theory in non linear programming (Optimization)
2.	Dr. Jolly Puri	Ph.D.	Optimization Theory
3.	Mr. Rajbir Singh	Ph.D.	Statistics
4.	Dr. Ram Niwas	Ph.D.	Reliability, Modeling And Analysis
5.	Ms. Isha Dhiman	M.sc.	Mathematical Modeling
6.	Ms. Nisu Jain	M.Sc.	Differential Equation And Numerical Analysis
7.	Mr. Pramod Vaishnav	M.Sc.	Theoretical Seirmology

3. Thrust areas of research

Functional Analysis, Theoretical Astrophysics, Reliability, Operations Research, Numerical Analysis, Partial Differential Equations, Algebra, Fuzzy Reliability Analysis, Fuzzy Optimization, Partition Theory, Number Theory, Mechanics, Mathematical Programming.

4. Brief description of ongoing research activities

Research on L^1 convergence of trigonometric series and automorphism of finite p-group, operation research, numerical analysis and enumerative combinatorics is done actively in the school by mathematics faculty.

5. Activities round the year (2015-16)

In addition to teaching various courses of UG and PG level during the session 2015-16, faculty of the School was involved in various research activities which produced good quality publications in refereed international journals. The research activity also includes the supervising of Ph.D and M.Sc thesis. Details of thesis and publications are followed in following sections.

Several faculty members and students have participated in several national and international conferences and academic events. Various experts also visited our department and delivered expert lectures. Details of expertise visits are given in section

6. Departmental Achievements

• Papers published in SCI Journals	:	36
• Papers published in Non SCI Journals	:	08
• Sponsored Research Projects Ongoing	:	(143.54 Lakhs)
• Doctoral Degree Awarded	:	10
• Lectures by visiting experts	:	04
• Awards and Honors	:	01

7. List of ongoing sponsored projects

1. On q-series Split n-colour partitions and F-partitions
2. On Combinatorics of q-series, Rogers-Ramanujan type identities and split n-color partitions
3. Divisibility Conjecture and Existence of Non-Linear Automorphisms of order p for Non-Abelian Finite p-Groups
4. Non smooth minimax fractional programming problem
5. Finite Volume Analysis of PDE Models Arising in Neuronal Variability
6. Automorphisms of Finite p-Groups
7. Non inner and class preserving Automorphisms of Finite p-Groups
8. Higher order Discontinuous Galerkin method for unsteady incompressible Navier Stokes Equation: Analysis and Simulation
9. Construction of some New iterative methods for solving nonlinear equations

8. List of completed sponsored projects

1. On L1-convergence of trigonometric series with special coefficients
2. Algorithms for single and multi-criteria decision making problems in fuzzy environment
3. Algorithms for solving some fuzzy network flow problems

SCHOOL OF PHYSICS & MATERIALS SCIENCE

1. Academic Programs

The school offers core courses of Physics and Materials science to all the undergraduate students of the university. Besides the following three programs which are run exclusively by the school, other free courses, namely, Renewable Energy Materials, Nuclear Power Engineering, Modern Physics and Nanoscience and Nanomaterials, Engineering Materials, Applied Physics etc are offered to the university students.

- Master of Science in Physics (2 Years)
- Master of Technology in Materials and Metallurgical Engineering (2 Years)
- Ph.D

2. List of faculty

Distinguished Professor

S. No.	Name	Qualification & Specialization
1.	NIL	

Senior Professor

S. No.	Name	Qualification & Specialization
1.	Dr. N. K. Verma	Ph.D., Synthesis and characterization of nanostructure materials
2.	Dr. O. P. Pandey	Ph.D., Solidification

Professor

S. No.	Name	Qualification & Specialization
1.	Kulvir Singh	PhD, Condensed Matter Physics (Glass, Ceramics & Bioceramics)
2.	Manoj Kumar Sharma	Ph.D (Theoretical Nuclear Physics)

Associate Professor

S. No.	Name	Qualification & Specialization
1.	Alka Upadhyay	PhD, Theoretical High Energy Physics
2.	Puneet Sharma	PhD, Nanomagnetism
3.	Bhaskar Chandra Mohanty	PhD, Thin Film Photovoltaics
4.	Surendra Deo Tiwari	PhD, Condensed Matter Physics
5.	Bhupendra N Chudasama	PhD, Nanomedicine Magnetic Fluids Magneto-optics
6.	Soumendu Jana	PhD, Nonlinear Optics, Photonics

Assistant Professor

S. No.	Name	Qualification & Specialization
1.	Dwijendra Pratap Singh	PhD, Experimental Solid State Physics
2.	Poonam Uniyal	PhD, Functional nanoceramics Multiferroic materials
3.	Loveleen Kaur Brar	MSc, SFM, LB-films, nanomaterials
4.	Debabrata Deb	PhD, Computational Soft Matter Physics
5.	Raj Kumar	PhD, Nuclear Physics
6.	Sunil Devi	PhD, Nuclear Physics

Lecturer (Ad-hoc)

S. No.	Name	Qualification & Specialization
1.	Gudveen Sawhney	PhD, Theoretical Nuclear Physics
2.	Rabia Pandit	PhD, Experimental Condense Matter Physics

3. Thrust areas of research

Theoretical Nuclear & Particle Physics

Energy Materials

Soft Condensed Matter

Nanomaterials

Non-linear Optics

4. Brief description of ongoing research activities (with pictures of key experimental setups or equipment)

The main research focus of the faculties of the department is divided into three groups. Theory group (Theoretical Nuclear & Particle Physics, Non-linear Optics, Computational Soft Matter Physics), Energy Materials (Solar Cell, Solid State Fuel), and Experimental Condense Matter (Nano-materials, Nano-Magnetism, Ceramics Composite Materials, Electro Magnetism, Nano-medicine) Picture are as attached.

5. Activities round the year

Apart from regular courses and academic activities, the school also engages in many different other co-curricular and outreach activities. The school organizes expert lectures, conference, short-term schools at the department and a list of such activities is attached below as a part of this report. The main outreach activities and expert lectures are organized by our schools Materials and Physics Society (MAPS).

6. Achievements during 2015-16

- Papers published in SCI Journals: 67
- Papers published in Non SCI Journals: 05
- Papers published in conferences: 43
- Sponsored Research Projects New: 04 projects worth Rs 102.17 Lakhs
- Sponsored Research Projects Ongoing : 13 projects worth Rs 291.48 Lakhs
- Seminar/Conference/Workshop organized: 02
- Doctoral Degree Awarded: 15
- Visits abroad by faculty members: 02

7. List of ongoing sponsored projects

1. Radiation induced opto-structural modifications in borosilicate glasses
2. Fund for improvement of Science and Technology Infrastructure (FIST)
3. Development of barium hexaferrite ($\text{BaFe}_{12}\text{O}_{19}$) thick films for micro/millimeter wave device application.
4. Studies on antimicrobial properties of metal and metal oxide nanostructures
5. Synthesis of $\text{BiFeO}_3 - (\text{K}_{0.5}\text{Na}_{0.5})\text{NbO}_3$ thin films for device applications
6. Synthesis and Characterization of $\text{Na}_2\text{S}-\text{P}_2\text{S}_5$ glass/glass-ceramic based solid electrolytes for Na-ion batteries
7. Development of M type hexaferrite films for microwave device applications
8. Effect of Magnetic Anisotropy and Particle Size Distribution on the Magnetization of Anti-ferromagnetic NiO Nanoparticles
9. Low energy properties of baryon octets and decuplets in phenomenological models
10. Various Decay mechanism of nuclei formed in low energy heavy ion reactions.

11. Photovoltaic and grain boundary characteristics of single target sputtered $\text{Cu}_2\text{ZnSnSSe}_4$ thin film solar cells
12. Dynamical behaviour of nuclear systems formed via light particles and heavy ion induced reactions.
13. Development of transition metal oxide decorated graphene-polyppyrole nano composite as RADAR absorbing materials



Instrument Waveguide



Instrument Fiber Optics

LMThapar School of Management

Positioning in the national environment:

- Ranked 1st in Global Sensitivity by Higher Education Review (Issue: December 2015), Bangalore, India.
- Ranked 21st amongst top B-Schools in India by Business School Survey, Business India (Issue: December 2015), Mumbai, India.
- Final Placement of **three** students at International Level.
- Summer placement of **four** students at International Level.
- Maximum research publications by faculty and doctoral students during the period under review.
- Admission of **two** Foreign Students in Ph.D. Program.
- MoUs with Danube University Krems, Austria and Tel-Aviv University, Israel, for student exchange and research collaborations.
- Maximum number of applications received in 2015-16 for 2016-18 batch admission in MBA program.

We develop scholarly practitioners with a social entrepreneurial mind-set by training them to maximize the value of efficiency enhancing mechanisms of free market and at the same time educating them the limitations and ethics of profit maximizing mechanisms to prevent excesses to avoid situations like the global economic meltdown of 2008. Managers should passionately create value for all stake holders not just to extract value for themselves. Creating economically and environmentally sustainable businesses is another major area of intellectual pursuit at our school.

Business Schools Engage the World

We are committed to engaging the community around us as the first step in contributing to the overall well-being of the nation and the world. We are first an institution of higher education and then a business school. We must fulfill the function of a center for advanced learning and a place where young minds are groomed to become brave and passionate citizens who are intellectually free to dream, architect and build the world of their imagination.

1. Academic Programs

Post-Graduate: Master of Business Administration (MBA) Program

a. MBA Program Goals

- We Educate Globally Sensitive Scholarly Practitioners with Social Entrepreneurial Mind-set
- We believe that what is good for the world should be good for the nation and what is good for the nation should be good for its citizens. We want to groom a generation of thinkers, practitioners and leaders who are adept at solving both local and global problems with utmost global sensitivity. Global sensitivity has a much broader scope than just cultural sensitivity. It encompasses everything from rules and regulations to economic situations to geographic peculiarities.
- We base our philosophy of educating scholarly practitioners on the following two assertions:
 - “Nothing is as practical as a good theory” *by Kurt Lewin*
 - “Nothing is as dangerous as a bad theory” *by Sumantra Ghoshal*

We want our graduates to be able to understand the power of good science and at the same time recognize its limitations. We pay special attention to generating new ideas and synthesizing and integrating existing ideas for applying them to solve real world problems.

- We want every graduate to have a strong entrepreneurial orientation with an emphasis on doing social good. Irrespective what kind of enterprises they create or work for, a strong orientation

toward societal good must be the starting point of any decision they make. We believe only the right balance between social and economic good can produce sustainable businesses. Also we consider social entrepreneurial mind-set as synonymous with sustainability mind-set.

MBA Program Learning Outcomes

Global Sensitivity

- Students will be able to understand the socio-economic and political differences across the globe
- Students will be able to analyze contemporary issues related to international management

Scholarly Practice

- Students will be able to comprehend the power and limitations of management as a discipline
- Students will be able to apply theoretical concepts to solving real world business problem

Social Entrepreneurial Mind-set

- Students will be able to appreciate the notion that “what is good for the business should be good for the community and ultimately good for the country”
- Students will be able to reframe social issues for creating innovative solutions for producing social good in a sustainable way

b. Doctoral: Ph. D. Program

Doctoral Research Program Goals

Our doctoral program aims at developing engaged scholarship with true professionalism.

Doctoral Research Program Learning Outcomes

Engaged Scholarship

- Students will be able to formulate research questions addressing social and organizational issues
- Students will be able to apply scientific methods and theoretical insights to address real world business and societal challenge

True Professionalism

- Students will develop an appreciation for the importance of balancing between rigor and relevance in teaching and research
- Students will develop skills for effective oral and written communication of scholarly findings

2. List of faculty

Professor

S. No.	Name	Qualification & Specialization
	Dr.Padmakumar Director	Nai Dr. Eng., Ph. D. ,M. Tech. (IIT), MBA Sustainability, Material Science, Nanotechnology, Social Entrepreneurship and Leadership
	Dr. AK Dhingra Visiting Professor	Ph.D, MBA, B.E Human Resource and Energy Management
	Dr. Girish Jaswal Visiting Professor	Ph.D, MBA, MA, LLM Marketing, Business and Corporate Laws

Associate Professor

S. No.	Name	Qualification & Specialization
	Dr.M. Kanchan	M.Com, Ph.D Finance and Accounting Ph.D, MBA, M.Sc
	Dr.Karminder Ghuman Dr. Piyush Verma	Marketing and Entrepreneurship Ph.D. (Applied Economics), Master of Business Economic (MBE), Diploma in German Language Economics, Strategy and Technology Innovation
	Dr. Snehlata Jaswal	Ph.DPsychology, HR & OB

Assistant Professor

S. No.	Name	Qualification & Specialization
1.	Dr. Gurparkash Singh	Ph.D., Masters in Information Systems, PGD(IT); Information Systems, Ethics and Knowledge Management
2.	Dr. Amit K. Bhardwaj	M.Sc, ME,MBA, PhD Information Systems
3.	Mr. Pradeep K. Gupta	B.S c., MBA, FDP-IIMA, PhD Pursuing. Accounting and Finance
4.	Mr. Ankit Mahindroo	BE(Industrial), MBA, Pursuing PhD Information Systems
5.	Dr. Harjot Singh	BE, MBA, PhD Marketing
6.	Mr. Gaurav Goyal	B.Tech, M.Tech, MBA, Pursuing PhD Operations and Quantitative Techniques
7.	Ms. Niti Chatterjee	B.Com.(H), MBA, Pursuing PhD OB, HR and Communication
8.	Dr. Vipul Gupta	BE , MBA, PhD Operations and Quantitative Techniques
9.	Dr. Sonia Garg	B.Tech, MBA, PhD Finance
10.	Mr. Sanjiv Dhir	Pursuing Ph.D, MBA,MS, B.E, Marketing and Finance
11.	Dr. Rudra Rameshwar	B.Tech.(Electrical Engg.), GATE (E&C Engg.), M.Tech (Alternate Hydro Energy Systems, IIT Roorkee), D.B.I (Business Entrepreneurship, EDI Ahmedabad), Ph.I (Strategic-Technology Management, IIT Roorkee)
12.	Dr. Shalu Bansal	B.Com, M.Com, MBA, M.Phil, Ph.D. Finance and Accounting
13.	Dr. Arunesh Garg	BE, MBA, PhD Research Methods & Marketing
14.	Dr. Anita Sharma	Ph.D. , MBA; Strategy & Entrepreneurship
15.	Dr. Ridhi Arora	Ph.D. , M. Phil, M.L.L & L.W. PGDM-PM&HRD; HR & OB

Lecturers (Ad-hoc)

S. No.	Name	Qualification & Specialization
1.	Mr. Hemant Sharma	B.Sc (H) Physics, PGDM , PhD pursuing. Quantitative Techniques, Strategy & Technology Innovation

3. Thrust areas of research

- Sustainability & Social Entrepreneurship
- Behavioral Decision Science
- Quantitative Culture Studies
- Academic & Corporate Leadership
- Business Analytics & Operational Excellence

Research facilities/centers with International Recognition:**i. Centre for Strategy, Sustainability & Society**

The Centre for Strategy, Sustainability & Society (CSSS) at LMThapar School of Management, Thapar University is a vibrant research and consulting group focused on multi-disciplinary and applied research. The Centre is envisioned to emerge as a catalyst for encouraging business strategy driven sustainability initiatives to address the challenges confronting business and society alike by offering sustainability oriented academic programs, academia-industry-government network and community development projects.

The Centre focuses in the following broad areas & activities:

1. Academic Programs and Courses
2. Research and Consulting projects
3. MDPs, FDPs and Workshops
4. Community Engagement Projects
5. Promote Global Initiatives for Sustainable Development
6. Sustainable Innovations Project
7. Seminars, Symposium and Conferences

Organization:

- Centre for Strategy, Sustainability & Society (CSSS)– Core
- Environment & Sustainability Club(ESC)– Student's Wing

Programs/Initiatives of CSSS:

Environment & Sustainability Awareness Campaign	(26 th January, 2015)
Workshop on 'Clean India- Green Industry'	(5 th February, 2015)
Design Innovation Challenge	(5 th April, 2015)
Earth Day Events	(22 nd April, 2015 & 2016)
MDP on 'Sustainable Business Models'	(25 th -26 th September, 2015)

ii. Venture Lab-Thapar

Profile:

Venture Lab-Thapar has been conceptualized in collaboration with the Venture Lab International of the University of Twente, the Netherlands with a focus on developing an entrepreneurial learning environment that provides educational, technological, financial, infrastructural and strategic support to budding entrepreneurs from within and outside Thapar University. Centre for Innovation, Incubation and Entrepreneurship (CIIE), IIM (Ahmedabad) is collaborating with Venture Lab to establish it as a vibrant and leading incubation centre in Northwestern India.

Mission:

"To nucleate entrepreneurial spirit and nurture startups for creating social and commercial value, thereby making TU the most entrepreneurial university of India"

Goal & Objectives:

- To nurture entrepreneurship facilitating mindset in one and all.
- To be a leading hub of entrepreneurship in North-Western India in 5 yrs.
- To make TU the most entrepreneurial university of India.

Focus:

- Aim would be to empower and equip 10% of our students for an entrepreneurial career and launch technology led enterprises as well engage with community with respect to Product Co-Creation Concept:
- Technology intensive Entrepreneurship
- Clean Air, Water & Waste Management
- E-Commerce
- Energy-efficiency consulting organizations
- Organic Food: Market Linkages & Front-end Marketing Organization
- Small Tech for Small Farmers/Entrepreneur

Model:

- Introduce entrepreneurship as a way of life for nurturing entrepreneurship facilitating mindset, and not just as a career
- Workshop for faculty on **Entrepreneurial Pedagogy**
- Exposing students to the fundamentals of creativity, innovation & venture creation
- Pairing ME/MTech/PhD students with MBA students interested in entrepreneurship

- Problems from Startup ventures as Research Projects for Faculty and Assignments for the students
- Venture Creation in Practice as part of MBA Curriculum
- Entrepreneurs in Residence

i. Centre for Business Analytics & Excellence

About the centre:

The LMTSM Centre for Business Analytics and Excellence focuses on the development of analytical thinking with large, ambiguous and complex data from diversified sources and translating it into potential solutions for dynamic business challenges and helps in developing new tools, methods and approaches to harness the power of big-data and business analytics.

The centre aims at creating opportunities for academicians, students, and industry partners to come closer and bring about synergy related to the strategic thinking, operational methodologies and analytical problem solving that inspires organisational excellence.

Centre Goals:

Research and Training are two primary goals of the centre. Within these broad categories, the centre focuses on:

- **Research Collaboration:** Develop collaborative research relationships with Global academic and industrial units for Big data analytics
- **Training:** Work with commercial firms, NGOs, and academic institutions to develop coherent learning through workshops and training programs to explore opportunities for business students in the areas related to analytical decision making
- **Consultation:** Partnering with national and international agencies for developing business improvement Strategies for SMEs/ MSMEs
- **Certification:** Conducting extensive training programs for industry practitioners and academicians leading to Certifications of international repute.

Academic Associations:

- Dr. Kannan Ramanathan, University of Texas at Dallas, USA
- Dr. Harsh Vardhan Samalia, IIM Shillong, India
- Dr. Padmanav Acharya, NITIE Mumbai, India
- Dr. Lalit Garg, University of Malta, Malta
- Dr. Ramkumar M, PhD IIT Kharagpur, India
- Dr. Chintan Amrit, University of Twente, Netherlands

Industry Associations:

- Mr. Nishal Gupta, Senior Director - Retail Processes & Operational Excellence, Flipkart
- Mr. Sanjay Virmani, Co-founder The Banyan Tree
- Mr. Kanwal Preet S. Brar, Founder , The Freshmart
- Mr. Ravi Jaidka, MD, ISJEC, Yamunanagar

ii. Centre for Learning Resource Development

Centre for Learning Resource Development (CLRD) is being established with the mission of enriching management education. It would develop and disseminate teaching-learning resources that help us to achieve a high level of leadership and managerial competencies amongst the management graduates. Hence, CLRD would act as a catalyst for augmenting the classroom environment by creating content and developing pedagogy that leads to attainment of goals of higher education.

In its pursuit of enabling the students in their journey of becoming successful managers and leaders, Thapar University's LM Thapar School of Management nestled in its new campus at DeraBassi is set to usher in a change in creation of better managers and business leaders who are pragmatic in their decision-making activities. The Centre would pursue this objective through a multiple-pronged approach.

The first and foremost is to set up a repository of case studies: traditional, short and mini cases as well as videos and cartoons. We believe that a case is a story which recounts in a realistic manner the situations or events which permit the students to experience the complexities involved in decision making. As they see themselves as the protagonists in the case, they would be able to suggest innovative solutions to the hurdles they are presented with. It would encourage both faculty and students to reinforce their learning process through visual and written aids.

Secondly, case study competitions would be conducted by the centre with awards for the best cases presented by faculty from various B-Schools adding to the repository which would be accessible by the B-schools the world over.

LM TSM through CLRD also aims at establishing a symbiosis with the industry which would partner the Centre for case studies. Case study workshops and Faculty Development Programs would be conducted at regular intervals to develop analytical and problem solving skills to help solve the real-world challenges, the art of persuasion and critiquing and to justify one's reasoning and decisions. These would also impart the ABCs of case writing and teaching and the outcomes of such workshops would be published in a journal of case studies.

LM TSM Distinguished Speaker series involving interactive sessions and panel discussions with eminent leaders of the government, industry and academia would also be launched by the centre to enrich the management literature (as these sessions would be documented) as well as to develop and motivate the students.

Our overall aim is to assist our students and participants turn into better leaders in their respective domain for the creation of new India which we believe starts at LM TSM. In this connection, CLRD plans to institute a Chair under which the FDPs and case study workshops and case competitions could be conducted for enhancing the quality of management education in India.

iii. Centre for Governance

Vision

To foster growth-oriented and people-cantered good governance at local and national levels.

Mission

1. To work with Government agencies to implement both rural and urban governance reforms.
2. To be a think tank to foster growth-oriented governance practices.
3. To support change Management programs.

The Centre for Governance has been established by a MoU between Avantha Foundation and L.M. Thapar School of Management, Thapar University for collaborative research in the field of urban and local governance. The Centre undertakes action oriented research which would be implemented by AF in collaboration with State Governments.

It would offer professional advice, conduct change management programs for Government departments and agencies in implementing their reform agenda. With the 73rd and 74th Constitutional amendments, ULBs have independent charge of bring in reforms as the third tier of the Government. With limited

grants from the Union and State Governments, ULBs are required to improve their efficiency in revenue generation and costs incurred. As the locally elected representatives are ill-equipped to deal with the situation of insufficiency of funds, LM TSM through the Centre would research and offer solutions to overcome the problems of poor governance.

Work-in-Progress:

As a pilot study, the Centre has conducted extensive research in the towns of Kullu and Dharamshala in the area of financial management of the respective Municipal Councils. The work included the study of the revenue generating systems and improving the rent collection efficiency of the municipal properties in the two MCs. A report was prepared and presented initially to the team at Avantha HQ at Pune and later to the MC officials and councilors at Kullu in April, 2016. The suggestions included training programs to be conducted for the MC employees in basic computer management and cost-effective methods of improving the rent collection. The basic computer awareness training program has been scheduled and will be held in phases to include MC employees of different cadres.

Programs for 2016 would include research in capacity building of MCs in Rajasthan and Nagar Panchayats in Uttarakhand.

iv. Centre for Indian Management

Vision:

Globalizing Indian management thought

Mission:

Critically evaluating and concretizing the Indian management thought and practice; developing conceptual frameworks, models and tools, thus helping practitioners to operationalize it.

Objectives:

- Accumulate resources and literature that can be employed to conduct research in the domain of Indian management.
- Promote research to augment the scholarly literature in the realm of Indian management to document the principles, practices, perspectives and philosophy of Indian management.
- Explore and research the thought & philosophical dimensions beyond the realm of tools, practices and strategies to develop a holistic understanding of reality.
- To create literature that strengthens self-pride in Indians by critically analyzing the cognitive dominance that Indians went through under foreign occupation.
- Undertaking training & consultancy assignments to institutionalize the practice of Indian management thought.
- Organizing roundtables of eminent experts in this domain to set the agenda.
- To establish a sponsored Chair of Indian Management at LM TSM.
- Develop compendium of scholars working in the domain of Indian management.
- Strengthen discussion, dialogue and discourse in relation to Indian management thought.
- To create and promote a curriculum with respect to Indian management.
- To act as a lab and an incubator of Indian Management so as to nurture and promulgate tools and frameworks of Indian management beyond the domain of business.

Advisory Board:

- Prof. Subhash Sharma, Director, Indus Business Academy, Bangalore
- Prof. Ananta Giri, Madras Institute of Development Studies, Chennai
- Prof. Harsh Purohit, Dean, WISDOM, Banasthali University, Banasthali, Rajasthan

4. Brief description of ongoing research activities

Research is being carried out in the areas of management, humanities and social sciences. Main focus areas of research are innovation, sustainable development, technology management, social entrepreneurship, organizational behavior and theory, information systems, marketing, finance, quality management, healthcare, corporate and academic leadership.

5. Achievements during 2015-16

• Papers published in SCI Journals	:	03
• Papers published in Non SCI Journals	:	17
• Papers published in conferences	:	12
• Doctoral Degree Awarded	:	03
• Lectures by visiting experts	:	30
• Visits abroad by faculty members	:	21
• Seminar/Conference/workshop organize:		05

6. Information regarding foreign visits

1. Dr. Amit Bhardwaj visited Tel Aviv University, Israel. For Summer workshop on Advanced Research Methods (SWARM 2016) during June 2016
2. Dr. Arunesh Garg visited Tel Aviv University, Israel. For Summer workshop on Advanced Research Methods (SWARM 2016) during June 2016
3. Dr. Anita Sharma visited Tel Aviv University, Israel. for Summer workshop on Advanced Research Methods (SWARM 2016) during June 2016
4. Dr. Anita Sharma visited University of Groningen, Netherland for Embedding
5. Entrepreneurship in Engineering Education during February-March, 2016
6. Dr. Ridhi Arora visited Tel Aviv University, Israel. for Summer workshop on Advanced Research Methods (SWARM 2016) during June 2016
7. Dr. Ridhi Arora visited University of Groningen, Netherland for Embedding
8. Entrepreneurship in Engineering Education during February-March, 2016
9. Dr. Karminder Ghuman visited Groningen University, Groningen, Holland for
10. Summer School 'Exploring Entrepreneurship' during August 22 - 29, 2015
11. Dr. Karminder Ghuman visited University of Groningen, Netherland for Embedding
12. Mr. Pradeep Kumar Gupta visited Raffle Convention Centre, Singapore for
13. AACSB Asia Pacific Conference during 29-31 May, 2016
14. Dr. Piyush Verma visited university of Groningen, Netherland for Embedding
15. Entrepreneurship in Engineering Education during February-March, 2016
16. Dr. Piyush Verma visited Colorado State University, USA for Academic and
17. Research Collaborations during 12-14 June, 2016
18. Dr. Piyush Verma visited Tel Aviv University, Israel. for Collaboration with
19. Porter School of Environmental Studies during 03-06 April, 2016
20. Dr. Piyush Verma visited Tribhuvan University, Kathmandu, Nepal for Symposium on Social Economy, Regional development and Poverty Reduction
21. Centre for Economic Development & Administration (CEDA) during 13 February, 2016
22. Dr. Piyush Verma visited European Organization for Sustainable development, Karlsruhe, Germany for International Greening Education Summit Education for Sustainability during 21-23 October, 2015
23. Dr. Piyush Verma visited Nanyang Technological University, Singapore for
24. Conference on A Community of Practice for More Effective Implementation of Higher Education for Sustainability in Asia during April 21 - 22, 2016
25. Dr. Padmakumar Nair visited Nanyang Technological University, Singapore for Conference on A Community of Practice for More Effective Implementation of Higher Education for Sustainability in Asia during April 21 - 22, 2016
26. Dr. Padmakumar Nair visited Miami, USA for AACSB Deans' Conference during January 31-February 02, 2016

27. Dr. Padmakumar Nair visited Vancouver, Canada for Academy of management 75th Annual Meeting during August 6-11 2015
28. Dr. Padmakumar Nair visited Krems, Austria for 37th Annual EAIR Forum Krems during August 30- Sept. 02 2015
29. Dr. Padmakumar Nair visited University of Groningen, Netherlands for Venture Lab North Groningen during March 10-21 2016
30. Dr. Padmakumar Nair visited Raffle Convention Centre, Singapore at AACSB Asia Pacific Conference during 29-31 May, 2016

CENTERS AND CENTRAL FACILITIES

CENTRE FOR INDUSTRIAL LIAISON AND PLACEMENT (CILP)

CENTRE OF INFORMATION AND TECHNOLOGY MANAGEMENT
(CITM)

CENTRE OF RELEVANCE AND EXCELLENCE IN AGRO &
INDUSTRIAL BIOTECHNOLOGY

CENTRAL WORKSHOP

NAVA NALANDHA CENTRAL LIBRARY

SCIENCE AND TECHNOLOGY ENTREPRENEURS PARK (STEP)

CENTRE FOR INDUSTRIAL LAISION AND PLACEMENT (CILP)

Campus Placement/recruitment of final year students

In the academic year 2015-16, 172 companies visited TU and 926 students were offered jobs through campus placement. In BE, Bio-Tech 12 out of 13, Civil 24 out of 49. Chemical 39 out of 59, Computer Sc. 141 out of 146, Electronics Communication 149 out of 160, Electrical 51 out of 60, Instrumentation & Control 49 out of 58, Mechanical 86 out of 98, Mechatronics 13 out of 18 & MCA 61 out of 81 students securing CGPA 6.00 and above got placed through campus interviews. The overall placement being 85% for CGPA greater than 6.00 and 78% over all in all the BE Branches & MCA. Apart from BE and MCA students, 179 master's students (ME & M.Tech) also got placement through campus interviews, making it 55% overall in Master's of Engineering. Also 23 students from MBA Industrial and 63 students from MBA got placement through Campus interviews (**Annexure-VI**). **The above data is updated till 30th June, 2016.** Also result from 10 organizations are awaited and 37 organizations have already confirmed to visit for campus interviews for the students already passed in the year June, 2016. **Organizations are still visiting our campus for the students those have already passed out from our University, and hence the percentage mentioned above is likely to improve.**

Apart from regular visitors, 28 organizations including five startups visited the campus for first time for campus interviews. Major are Works Application Company Ltd. Japan, Walmart Labs, Prop Tiger, HSBC Software Development, Synopsys, Jugnoo, RBS (R&D), Shortel, Oxigen, Click Labs, United Health Group, Asian Paints, General Motors, Routofy, Hashedin Technology, United Lex, NEC Technology, Think & Learn, Bombardire Group, HT Media Ltd., SNA Power, Cremica Foods, Milk Fed, OMIC International, Sun Pharma, JDA Software, Edelweiss Financial Services etc etc.

The Maximum CTC offered for the year 2015-16 is Rs. 38.00 lakhs p.a. offered to 02 students from Work Application Co. Japan,

Average CTC offered to BE/B.Tech./MCA, ME/M.Tech, being Rs. 6.00, 4.33 lakhs p.a. respectively.

All the final year students were counseled and prepared, through special lectures on career selection and preparation for campus interviews by industrial experts as well as by the faculty of the university. They were given special tips for appearing in the campus interviews, through mock group discussions as well as personal interviews. Members of faculty from different departments were present during these interviews.

Feedback on various aspects regarding courses, curriculum, communication skills and performance of students was obtained from organizations, which had come for campus recruitment.

PROJECT SEMESTER

Final year Civil, Bio-technology & Chemical Engineering students were sent to Industry for the Project Semester from July-December, 2015. CILP was instrumental in arranging the slots for the students.

CILP extended all help in finding Project Semester slots for the pre final year students of Mechanical, Industrial and Mechatronics Engineering during January to June, 2016. Also CILP helps in finding project semester slots for the final year students of BE-Electrical, Electronic Instrumentation & Control, Electronics Communication & Computer Science during January to June, 2016. CILP also extended help in finding slots for System Development Project (SDP) for final year MCA students and also for thesis work for Post Graduate students.

SUMMER TRAINING PROGRAMME

Summer training of 6 to 8 weeks was arranged in industrial organizations for B.E. 2nd year students of Electrical & Electronics Communication Engineering, Electronics (Instrumentation & Control) Engineering, Electrical Engineering, Chemical Engineering and Computer Science and Engineering branches.

CILP extended all help in finding training slots for the MBA students for two month training in industry during May - July, 2016.

VISIT TO DIFFERENCE PLAKHSES

Sh. H.S.Bawa and Sh. Davinder Pal Singh, attended the Sparsh 2015, Placement Officer's meet conveyed by TCS, in Gurgaon on 3rd - 4th July, 2015 and exchange the ideas regarding IT initiatives by TCS to various institutions.

Sh. H.S.Bawa, attended the meeting of Training & Placement Officers conveyed by Cognizant in Poovar Island from 7th - 9th August, 2015, called primarily for the exchange of idea regarding academic interaction

All the final year students were counseled and prepared, through special lectures on career selection and preparation for campus interviews by industrial experts as well as by the faculty of the university. They were given special tips for appearing in the campus interviews, through mock group discussions as well as personal interviews. Members of faculty from different departments were present during these interviews.

Feedback on various aspects regarding courses, curriculum, communication skills and performance of students was obtained from organizations, which had come for campus recruitment

CENTRE OF INFORMATION AND TECHNOLOGY MANAGEMENT (CITM)

Centre of Information and Technology Management (CITM) has been established in the University after integrating three units, namely, Computer Centre, Centre for Information Super-Highway and University Science Instrumentation Centre. This centre has been established to cater the needs of users involving implementation, maintenance and support activities related to LAN/WLAN, software and hardware; procurement, support and maintenance of various equipments of users.

CITM offers internet access and network services to Thapar University. As on Oct 11, 2016 CITM has two static leased line connections: 1085 Mbps leased line from Reliance and 1000 Mbps from National Knowledge Network (NKN). The Campus-wide Local Area Network (LAN), which currently has 5000 live nodes (wired and wireless), is backboned by Optical Fiber connected with layer-3 and layer-2 switches, structured with CAT6 cabling.

The CITM has state-of-the-art computational labs and one DATA CENTRE. CITM Labs remain open from 8.00 AM to 8.30 PM on all working days and from 9.00 AM to 5.00 PM on Saturdays. The computational facility in the Centre includes 14 Dell Power Edge servers and 97 nodes and other peripherals. CITM is a member of Oracle Academia Initiative program of Oracle India Ltd. and Microsoft Campus Agreement.

CITM also provides repair and maintenance of Electronic Instruments/Equipment and, PCs and peripherals used in various Laboratories. This centre is contributing in the implementation of ERP software that includes modules financial management, inventory management, human resource management, purchase management, academic activities etc. and its related support to the users of Thapar University. CITM is also responsible for maintenance and administration of Thapar University Website. The main objective of centre is to provide better support and services to the users for their individual as well as collective growth.

List of Faculty/Staff

S.No.	Name	Designation	Qualification & Specialization
	Dr. Maninder Singh	Associate Professor Head CSED & Head CITM	Ph. D. in Network Security, M with honours in Software Engineering Certifications: Ethical Hacker (C EH), Security Analyst (ECS) and Licensed Penetration Tester (LPT)
	Mr. Harcharan Jit Sing	Sr. System Analyst - cum Programmer	Ph.D. (Pursuing), M.E. (CSE), B. Tech. (CSE) Certifications : [CCNSP, ORACLE 10g -DBA, IBM DB2 9 Database]
	Mr. Prem Lal Sharma	System Analyst	ALCCS (eq. to M. Tech, CSE), AMIE (CS) System Administration, Cross Platform Networking, Web Base Applications
	Mr. Hunish Bansal	System Analyst	ME SE (Pursuing), B. Tech. (EIC) Database Administration, Microsoft Technologies
	Mr. Ajay Kumar Verma	Sr. Instructor	ITI, Instrumentation

Mr. Manoj Kumar	Associate Technical	ME CSE, M.C.A., MSc.IT, PGDCA
Mr. Ishmeet Singh	Associate Contractual	VB.Net 2008, Ado.Net, Asp.net
Mr. Harjaspreet Singh	Associate Contractual	B. Tech. Electronics CCNA
Mr. Jaswinder Singh	Electrician	MSc.IT, PGDCA Networking
Mr. Ghana Nand	Jr. Assistant	10th
Mr. Rajinder Singh	Attendant	Diploma in ECE

4. List of equipment procured

S. No.	Name of the equipment (Qty)	Make	Name of the laboratory	Date of Purchas (dd/mm/yyyy)	Amount (in Rs.)
1.	Networking equipments for Campus Wide IP Cameras	Brocade, Ruckus	Campus Wide	13/08/2015 20/06/2015	5,85,976/- 76180/-
2.	LAN/WLAN deployment in Admin Blocks Services	Brocade, Ruckus	Campus Wide	31/03/2015 24/06/2015 24/06/2015	43,46,011/- 10861/- 1,80,298/-
3.	LAN/WLAN deployment and Laying /Cabling of Hostel – J	Brocade, Ruckus	Hostel – J	31/03/2015 24/06/2015	32,84,479/- 53,574/-
4.	Access Point (04)			21/08/2015	6626
5.	Microsoft Edu Cloud Campus Agreement (1year subscription)	Microsoft	Campus Wide	03/09/2015	34,48,924/-
6.	Medium Back revolving chair(10)		CITM and Repair and maintenance office	25/09/2015	48,881/-
7.	Campus Subscription fee of Turnitin		Campus Wide	10/03/2016	4,40,473/-

S. No.	Name of the equipment (Qty)	Make	Name of the laboratory	Date of Purchas (dd/mm/yyyy)	Amount (in Rs.)
	plagiarism				
8.	Kaspersky Enc Point Security		Campus Wide	02/05/2016	3,87,180/-
9.	APC Backup UPS 1000VA 2U (3)			30/03/2016	26500/-
10.	Samsung LED UA32 (01)	Samsung		26/05/2016	21500/-
11.	OFC Splicing, Testing with OTDR Labeling			30/06/2016	23207/-
12.	DLINK OFC 6 CORE SM			30/08/2016	37997/-
13.	Software (300)			02/08/2016	3418136/-
	Software Desktop(450)				
	Software (03)				
14.	Digilink CAT6 (06)17U Rack Make			02/08/2016	39968/-
					16124/-
					11357/-
					12962/-
15.	Mathworks License for the Period from 1Aug 2016 to 31 July 2017		Campus Wide	29/08/2016	28,65,490/-
16.	Dell Optiplex 7440 All in On	DELL	CITM MAIN LAI	05/09/2016	20,87,520/-
17.	Citrix Xen Server Edition Perpetual pre		NOC	14/09/2016	87,599/-
					19,688/-

S. No.	Name of the equipment (Qty)	Make	Name of the laboratory	Date of Purchas (dd/mm/yyyy)	Amount (in Rs.)
	socket				
18.	Wireless Acces Point			23/09/2016	56,54,350/- 98,88,46/-
19.	Hostel PEB 600/300		Campus wide	21/09/2016	4,73,802/- 1,43,841/- 1,22,299/- 61,555/- 36436/- 132634/-
20.	Digilink CAT 6 305			06/10/2016	18999/- 137402/- 26590/-

5. Computing facilities in the CITM

S. No.	Details of the Hardware/Software	Name of the Laboratory
	Hardware	
	Dell Servers – 10	DATA CENTRE
	KVM Switch - 01	
	Central Storage- 01	
	Server Rack - 03	
	Dell Optiplex 330 P-IV – 02	
	Dell Optiplex 360 P-IV – 02	
	Dell Optiplex 9010 – 01	
I	Dell Power Edge R 730 Storage Server- 02	CITM NOC
	HP SAN P4300 - 01	
	HP Proliant ML 350P Storage Server- 01	
	Dell Optiplex 9010 – 01	
	Dell Optiplex 330 P-IV – 01	
	Dell Optiplex 380 P-IV – 01	
II	IBM Lenovo P-IV – 06	CITM -MAIN
	Dell Optiplex 9010 – 28	
	Dell Optiplex 380 P-IV – 05	
	Dell Optiplex AIO Series 7440- 12	
	Sun Ray 170- 08	
I	Dell Optiplex AIO Series 7440- 24	CITM Computing Lab

- Windows 98
- Windows NT 4.0
- Red Hat Linux 9.0
- Sun Solaris 10

Utility Software

- Antivirus: Kaspersky Endpoint Security 10
- Adobe Acrobat Professional 9.00AE – 05
- Web Publishing Tools
- Matlab
- Crystal Reports 9.0
- Staler 4.0

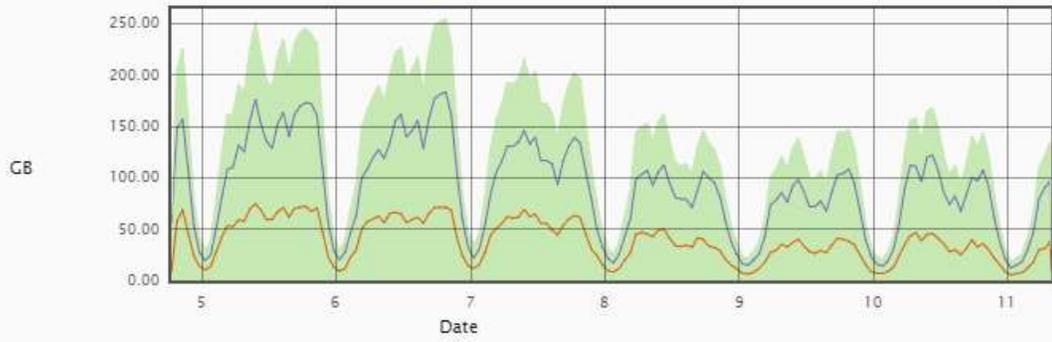
Application Software

- SQL Svr Ent 2008
- Oracle 10g
- Oracle 9.i (30 User)
- MS Visual Studio 2010
- MS Visual Studio 2008
- MS Visual Studio 6.0
- MS Office 2007
- MS Office 2000 Professional
- MS Office 4.3
- Nash Pack 3.0
- VC++ 2.0
- VB 4.0
- MS Project 4.0
- Neural Connection
- SPSS 20.0
- Citrix Xen Server 6.2

Academia Alliances

Microsoft Ed-vantage Program
Kaspersky Endpoint Security 10
Oracle Academia Initiative (OAI)

Monthly Bandwidth Consumption over NKN Link



Date (mm/dd/yyyy)	Upload Data Transfer (GB)	Download Data Transfer (GB)	Total Data Transfer (GB)
10/05/2016	1270.27	2851.99	4122.26
10/06/2016	1216.85	2790.53	4007.38
10/07/2016	1185.40	2591.70	3777.10
10/08/2016	821.91	1887.95	2709.86
10/09/2016	619.55	1587.37	2206.92
10/10/2016	697.83	1814.51	2512.34
10/11/2016	269.25	728.23	997.49
Total	6088.82	14308.82	20397.64



CENTRE FOR TRAINING & DEVELOPMENT (CTD)

CTD was set up in May 2015 with Mr. Sanmeet Sidhu as its Head. The Centre is responsible for identifying and addressing training & development needs for students and teaching & non-teaching staff of Thapar University & LMTSM.

Key Responsibility Areas:-

1. Responsible for designing and implementing student training lifecycle under **Smart Skill Development Program** (SSDP) aimed to improve campus placements and make students more Industry & Society ready.
2. Ensure that students at Thapar University and LMTSM are nurtured, trained and transformed into employable, future ready, global resources.
3. Provide on-campus mentoring and career counseling sessions for students.
4. Responsible for designing and implementation of training programs for teaching and non-teaching staff under **Staff Development Program** (SDP) to cover technical and behavioral aspects of work, train faculty on new developments in educational delivery system and best practices in instructional technology and pedagogy.
5. Identify, select and manage external training and accreditation bodies, agencies and providers necessary to deliver required training to appropriate standards.
6. Oversee administration and delivery of standardized tests like the GMAT (Pearson Testing) with technical support from Centre for Information & Technology Management.

Programs Conducted During the Academic Year July 2015- June 2016

A. Programs for Students

1. Placement Symposium: This is an event for final year UG and PG students, where exhaustive concept and practice GDPI (Group Discussion and Personal Interview) sessions are organized for the participants, with a comprehensive performance feedback, enabling them to bridge the gap between actual and expected levels. It was scheduled from **August 03- August 07, 2015**. Each of these days, students of a different branch were trained on employability related challenges. Day long concept sessions were held in the C-Hall; there were five sessions in all spanned across one and a half hours each: "Marketing Yourself", "How to excel in Group Discussions", "How to excel in Interviews", "How to brace up for Aptitude Tests" and "Preparing a winning Resume". Parallely, students were made to participate in Group Discussions, Case Studies and Interviews; every student got to experience one GD, one Case Study and one Interview. The sessions were taken by in house team as well as professionals with relevant experience; these professionals represented diverse facets of industry and academia and included trainers who are entrepreneurs, established authors as well as from premier institutions like the IIMs. Training was imparted to over 600 students and was well received by them. On the last day, an Aptitude Test was organized, covering areas like Quantitative, Verbal and Logical Reasoning. Apart from giving the students a near real experience of the actual process the Symposium was also used to segment students into three different groups, based on performance across multiple parameters --- the weights given to different parameters were--- 20% for CGPA, 30% for Symposium Interview, 15% for Symposium Group Discussion, 15% for Symposium Case Study and 20% for the Aptitude Test. Top 165 students (based on the above parameters) were nominated as members of the 'Thapar Achievers' Club (TAC)', others were segmented into two different groups. The same event was replicated at LMT

School of Management on **August 27, 2015**, for final year MBA students. On the basis of this, the training needs of the students were identified and programs were conceptualized and conducted. Training was imparted on weekends (Fridays & Saturdays) for Aptitude & Personality Development.

2. Thapar Achievers' Club (TAC) : This comprised a group of key performers in the Placement Symposium, based on a multiplicity of factors. The students of this group got advanced level training inputs so that the incremental efforts which they needed to put in, were judiciously channelized. Training was imparted on 8 weekends (in the months of September, October, November) on campus by a high end Industry expert with proven experience in mentoring, motivating and guiding students. Total number of training hours was 48. Out of the 165 members of TAC, 90% were pLakhsed till November 2015.

3. Smart Skills Development Program (SSDP) : This is a carefully crafted training program for students in different years of UG/PG. It is based on the vision of bracing students with a range of industry and society centric skills - effective communication & presentation, interpersonal skills, group dynamics, problem solving, decision making, data analysis, cultural sensitivity, change management – collectively known as 'Smart Skills'. While thrust is more on concepts & fundamentals for students in formative years, there is a strong application orientation for students in conclusive years of UG/PG. Training is imparted on weekends and select weekdays without disturbing the academic equilibrium.

This is an ongoing program and done on 10 weekends in each academic semester. The following SSDP programs were done in the academic year July 2015 to June 2016:-

August 2015- December 2015

- Effective Presentation & Interview Skills – conducted for BE 3rd year. This was done on Saturdays & Sundays, 8 hours per day, on 8 weekends
- Communication & Group Skills – conducted for BE 3rd year. This was done on Saturdays & Sundays, 8 hours per day, on 8 weekends
- Practice GDs/PIs – conducted for BE final year & PG final year, and MBA final year (LMTSOM). This was done on Saturdays, 8 hours, on 8 weekends at TU and on Saturdays (3 hours) on 8 weekends at LMTSOM
- Aptitude Training – conducted for Final Year MBA students of LMTSOM. This included study material and online access to training aids.

January 2016- May 2016

- Communication & Behavior Training – done for BE 2nd year and PG 1st year students, on Saturdays.
- Aptitude Training – done for BE 3rd year, MCA 3rd year and PG 2nd year students, on Saturdays at TU; done for MBA first year on Fridays for LMTSOM.
- GDPI training – done for BE 3rd year, MCA 3rd year and PG 2nd year, on Saturdays/Sundays.

4. Skill Studio

Skill Studio is an interactive student centric learning platform to create awareness w.r.t 'Smart Skills'. We believe that these 'Smart Skills' will brace the students with the desired skill component (along with technical skills) to perform well in Campus Placement selection tools. Additionally, they will also facilitate a candidate to acclimatize with organizational culture and walk confidently along professional and personal paths. Sessions cover a wide range of topics like Group Discussions, Personal Interviews, Effective Communication, Quantitative & Verbal Aptitude, Resume Building, Emotional Intelligence, Industry Readiness, Corporate Social Responsibility etc. Sessions are scheduled every Wednesday @ 5:30 pm. It is an initiative to make students experience the diversity of skills imperative for positive contribution and growth. Learning is encouraged through participative techniques using simulations, work sheets, role plays and team activities.

5. Industry Sensitization Programs

- A session on 'Effective Communication as a tool for success' by **Mr. EV Gireesh, Corporate Trainer & Life Coach, Mumbai**. Mr Gireesh, an international transformational speaker and success coach with clients like ISRO, NABARD etc, addressed B.E final year students on **September 20, 2015** in the TAN auditorium. The principles of effective communication were put across in a very participative and empirical manner, thus helping students to realize the power of communication in professional life. Students were also encouraged to come forward and make impromptu presentations, which were followed by a comprehensive feedback by the resource person.
- A session on 'Career Options and Test Taking Techniques' on **October 06, 2015** by experts from GMAC, Graduate Management Admission Council, the organization which administers the GMAT globally. The session was attended by over 100 students from different years of BE. The objective was to give inputs on strategic test taking techniques to help students to do better in various general aptitude tests. The session also addressed various career related queries of students, particularly the ones keen on pursuing management after engineering.
- A session on 'Decoding Indian Economy for Engineers' for B.E second and third year students on **November 03, 2015** in the main auditorium. The resource person was Ms. Manika Prem Singh, an entrepreneur economist with rich industry experience including that of having worked with the erstwhile National Planning Commission. The session spanned over two hours and dissected Indian Economy in a very interesting manner for the participants. It was an insightful experience for the engineers to know the various ways in which Economy could have a bearing on the technical and general environment of the country. The session touched upon basic concepts of Economy and then graduated to explain the inter linkages of these economic dimensions with the business and social fabric of the country. It was followed by a participative interaction between the students and the resource person.
- A session on 'Project Management' for B.E third year students on **November 27, 2015** in the main auditorium. The resource person was Mr. Vishal Narain Dar, Regional Director (North), PMA, India. The session, spanned across an hour, introduced the participants to the concept, issues, challenges and skills for effective project management. The key touch points of the session were as under:-
 - Concept of Project Management
 - Myths about Project Management
 - Trends in Project Management
 - The role of PMA as an exclusive Indian member of the International Project Management Association (IPMA)- the first global association of project practitioners, with members from 58 nations
 - Certification process/benefits for being an IPMA level D project management associate

- The session was well received by the students and was followed by an open house, wherein the students interacted with the resource person to clarify their doubts.
- A session on 'WorkpLakhse Ethics & Gender Sensitivity' was organized for all Ph.D students on **March 16, 2016**. The session was conducted by Ms. Aparna Jain (legal consultant and member of ICC) and was attended by over 80 plus enthusiasts. The session appreciated the importance of ethics at workpLakhse with particular reference to gender sensitivity.

B. Programs for Staff : These programs are designed for both teaching and non teaching staff. The focus areas of the programs include both technical and behavioural aspects of work. The following programs were conducted in the academic year July 2015- June 2016:-

1. A half day long Faculty Orientation Program on **September 17, 2005** in the C-Hall. The session was taken by the TU in house team. The key touch points of the session were as under:

- Faculty Roles & Responsibilities
- Instruction Planning, Instruction Delivery & Student Evaluation
- Synergizing student activities with the overall curriculum
- Academic Collaborations & Partnerships
- Research & Sponsored Projects
- Academic Administration & HR Equilibrium

2. A one week long training program for new faculty recruits from **September 21-25** in the C-Hall. The session was conducted by experts from National Institute of Technical Teachers' Training and Research (NITTTR), Chandigarh. The objective of the programme was to orient the faculty members on certain vital dimensions of academic pedagogy. The main touch points of the workshop were as under:-

- Learning & Principles of Learning
- Task Analysis
- Writing Objectives
- Instructional Methods : Case Study, Brainstorming & Seminar
- Planning, Organizing & Evaluating Practical Work
- Classroom Communication
- Setting Question Papers
- Tools for e-content generation
- Motivating Students
- Lesson Planning
- Sustainable Development: Role of Teachers

The workshop, attended by 30 faculty members, was highly interactive and concluded with a set of presentations by the faculty members with a comprehensive feedback by the NITTTR team.

3. A two day long workshop on "Enhancing performance at work pLakhse' was conducted by NITTTR on **December 1 & 2, 2015**. This was done for non teaching staff and comprised modules on Attitude, Behavior, Interpersonal Relation, Emotion Management & Computer Skills.

4. A workshop for non teaching staff on 'Gender Sensitivity & Sexual Harassment at WorkpLakhse' on **December 23, 2015**. The workshop was held in the C-Hall, conducted by Ms. Aparna Jain (legal consultant and member of ICC) and chaired by the OSD in the presence of the Registrar and Ms. Alpna Aggarwal (Chairperson, ICC). It was attended by over 50 participants and appreciated the key issues related to sexual harassment. The resource person gave insights into various challenges surrounding gender sensitivity at workpLakhse and supported them with examples from day to day life. The relevance of the topic was further enhanced through participative case studies.

5. A workshop on 'Enhancing Productivity at workpLakhse' was conducted on **February 6, 2016** for employees of Central Stores and Finance. This was done by a Chandigarh based organization : Mind & Heart Foundation. It was conducted through participative techniques and focused on aspects like stress management, time management, communication & behavior.

6. A day long workshop on 'WorkpLakhse Safety & Disaster Management' was conducted on **June 16, 2016** for clerical and support staff members (as nominated by the Registrar). The resource persons were outsourced from Momentum India (a national training organization based in Delhi) and covered areas like management of medical emergencies, basic Fire Fighting Techniques and disaster management. Training was imparted through practical methods employing filed activities.

CENTRAL WORKSHOP

The Workshop caters both to students training at various levels as well as production jobs specifically to meet needs of research, development, fabrication and maintenance for various departments and units of the Institute. About 450 graduate and polytechnic students are trained every semester through the course “Manufacturing Processes” by imparting skills in various fabrication processes like fitting, machining, carpentry, electroplating, welding, smithy, sheet metal etc. All students admitted to the first year go through this training process. Work Instructions to include step-by-step procedure for manufacturing jobs in each shop by the students as per course curriculum have been prepared for both degree as well as diploma classes. These are displayed at each machine during manufacturing of jobs.

CW-Production Centre

During the year under review the Production Centre undertook major fabrication work for various units of the University. It manufactured furniture for the hostels and is now doing almost the entire fabrication and carpentry jobs for the University.

NAVA NALANDA CENTRAL LIBRARY

The Central Library Thapar University is housed in a centrally air conditioned spacious premises covering an area of 25,000 square feet. The central library is the core of academic services, and therefore, become a key pLakhse in academic and research activities. With its collection of over **89746** books, it provides the ready to use information support to its users. Besides printed books and journals, central library collection includes e-Books, bound volume of journals, CD-ROMs, DVD, On-line databases, audio-video material, standards, specifications, theses, reports etc. The library collection consists of Textbooks, Reference Books, Book Bank, Encyclopedias, Handbooks, Standards, etc in the field of all engineering discipline and sciences, and humanities.

Library remains open 24x7 throughout the year, even on gazette holidays. However, Essential services are available till 8:30 PM. Most of the library operations are automated. Library catalogue (OPAC) can be searched from anywhere and subscribed e-resources can be accessed from the Campus only.

The emphasis of the library is to provide personalized information services in terms of subject support, research support, and content delivery to target user with minimum time. The library services are fully automated with modern web based library management system with automatic alert system.

Library Collection- Electronic:

Collection	Copies
Book Bank	2325
Book	89746
Bound Volume	5145
CD-ROM	447
Print Journals	59
Standards	4284
Thesis	2608

Library Collection- Electronic:

Central Library is subscribing and have access to following category of electronic resources

Type of e-Resource	S. No.	<i>Electronic Resources (Source/ Publisher)</i>	Count	Remarks
Databases	1	ISID	Single	Database
	2	JCC	Single	Database
	3	MathSciNet	Single	Database
	4	RSC	6	Database
	5	Web of Science	Single	Database
	6	J-Gate Complete	Single	Database

	7	JCR -Journals Citation Database	Single	Database
	8	Prowess Database	Single	Database
e-Books	1	Pearson ThinkTank	562	e-Books
	2	IEEE-Wiley e-Book Collection	657	e-Books
	3	EBSCOHost e-Book Collection	145	e-Books
	4	Kindle e-Books	867	e-Books
	Total		2231	
e-Journals	1	ACM Digital Library	138	Full Text
	2	American Chemical Society (ACS)	55	Full Text
	3	American Institute of Physics (AIP)	19	Full Text
	4	American Physical Society (APS)	13	Full Text
	5	American Society of Civil Engineers (ASCE)	35	Full Text
	6	American Society of Mechanical Engineers (ASME)	28	Full Text
	7	Annual Reviews	33	Full Text
	8	Cambridge University Press	224	Full Text
	9	Economic and Political Weekly	1	Full Text
	10	Emerald	175	Already
	11	IEEE/IEE Publications (IEL Online)-	453	Full Text
	12	Institute of Physics Publishing (IOP)	46	Full Text
	13	Nature Journal	1	Full Text
	14	Oxford University Press-	206	Full Text
	15	Portland Press	10	Full Text
	16	Project Euclid	39	Full Text
	17	Project MUSE	493	Full Text
	18	Royal Society of Chemistry	29	Full Text
	19	Science Direct from Elsevier	1239	Full Text

	20	Society of Industrial & Applied Mathematics	14	Full Text
	21	Springer Journals	1438	Full Text
	22	Taylor and Francis	1079	Full Text
	23	Through SAGE – 6 Journals	6	Full Text
	24	Wiley BLakhskwell	915	Full Text
	25	World Scientific Publishing company	2	
TOTAL			6691	
Standards	1	IEEE Standards	5099	Full Text
Proceedings	1	ACM Proceedings	1003	Full Text
	2	IEEE Proceedings	17744	Full Text
TOTAL			18747	

Library Service: The Library offers the following facilities/services:

1. Library Automation

The Central Library has shifted its library resources on new platform KOHA from SOUL due to emerging demand of the time. The library is now fully functional on this platform with new features of automatic email alerts, SMS alerts, Online WebOPAC, Book Images, Table of Content, etc



2. Digital Resource Centre:

Central library is digitizing its old archive collection and the digitization of all the previous thesis is over. The digitization of standards, old question papers, news clippings is in progress. **Reading Facilities:**

Three separate reading halls, including one exclusively for faculty and research scholars are available. In addition to these reading halls, reading space is available in the learner's zone, Community library and Print theses sections as well. Library has in all seating capacity for 350 readers.

3. Community library

For the families of staff and faculty members is a part of Library, where books, newspapers and magazines for children, grownups, ladies and senior citizens are available and this section remains open from 08:00 A.M. to 08:30 PM on all the working days.

4. Information and communication infrastructure:

The Library is equipped with state of the art facility which includes 800 nodes for Wi-Fi network in addition to wired connectivity. A number of computers are dedicated for library users. Resources like digital scanners, printers, photocopiers and surveillance system for security etc. are available.

5. Online resources and services:

The library resources are available for access through interactive library website <http://cl.thapar.edu>. The library also manages the University's digital archive Thapar University Digital Repository (TuDR) which can be accessed at <http://dsapce.thapar.edu:8080/jspui>. All the dissertations and theses are directly submitted to the digital repository.

6. Publication Database:

Central Library is very keen to disseminate and promote research publication. The library has developed in-house database "**Publication@Thapar** - Thapar University Publication Database" where all the publication has been indexed in helpful sequence. Various statistics are available in the form of annual publication count, department publication count, individual faculty publication count, journal impact factor and linking to full text access.



About	BioTech	Chemical	Civil	CSE	ECE	ME	IED	Physics	Maths	Chemistry	ISS	LMTSOM
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Publication@Thapar				
2019 (195)	2018 (193)	2014 (174)	2013 (176)	2012 (174)
2011 (158)	2010 (207)	2009 (198)	2008 (113)	2007 (88)
2006 (78)	2005 (85)	2004 (90)	2003 (36)	2002 (22)
2001 (8)	2000 (21)	1999 (18)	1998 (11)	1997 (11)
1996 (7)	1995 (7)	1994 (8)	1993 (6)	1992 (3)
1991 (2)	1990 (2)	1989 (2)	1988 (4)	1986 (5)
1985 (3)	1984 (4)	1983 (1)	1982 (1)	1981 (1)
1974 (1)	1973 (2)	1972 (1)	00	00

Publication Types		
Publication	Numbers	Scopus
Books	10	1
Book Chapters	15	11
Journals	2310	2588
Conferences	592	943
Abstract	0	
Grand Total	3487	3148

Department wise Publications		
Department	Publications	Scopus
IT	256	238
CHEM	82	68
CHEMISTRY	196	163
CVS	86	83
CSE	148	158
EE	290	278

7. Membership:

Library caters to faculty, staff and students of all the three institutions on the Campus. Students registered for Distance Learning course of University can also become members. Private local resident, professionals and institutions & industries and alumni of the university can also become member of Library on nominal fee.

8. Document Delivery Service:

Research paper/articles which are not available in the subscribed e-journals and print journals are procured by the library on request through Document Delivery Service (DDS). Library interacts with other libraries and agencies as NISCAIR for procuring research articles.

9. Library on Wheels:

To make faculty members and research scholars aware about 'Resources & Services @TU Library' library conducts and organize presentations in different departments from time to time.

10. Library Hours:

Library remains open for 24 hours throughout the week. Library services are provided from 8 am to 8.30 pm from Monday to Saturday. During the examination, the library services are also made available on Sundays.

11. Book Loans: During the reporting year a total of 38494 books were loaned out to the members.

Computing Facilities in the Library:

S. No.	Details of the Hardware/Software	Name of the Centre
	Software	Digital Resource Centre

S. No.	Details of the Hardware/Software	Name of the Centre
	Windows 2008 server, Windows 2007, 2003 Windows XP, SOUL, MS-Office 2010, OFFICE XP	
	Hardware	
1	IBM x226 Servers Xeon Server	2
2	IBM PIV	2
3	Dell PoweEdge T4P Sever	1
4	IBM System X, 3620 series Server	2
5	WIPRO Dual Core computer systems	15
6	LAPTOPS	5
7	Sharp photo copier	3
8	Sharp 45 (ppm) Multi-functional machine	1
9	Colored Scanner/ printer (multifunctional)	1
10	Canon Digital Photocopier	1
11	Barcode Printer	1
12	Surveillance system (Cameras and TV)	I unit with Cameras
13	Bar Code Scanners	5
14	Lamination Machines	2
15	External USB HDD for Backup	1

S. No.	Details of the Hardware/Software	Name of the Centre
16	Bar Code Scanner for stock verification in bui storage	1
17	Dell Optiplex Computer Systems	10
18	Dell Vostro 430 Minitower Intel Core i5	7
19	Dell Optilex 7010	5
20	DSLR Camera	1
21	HP Flatbed Scanner	1
22	LCD Projector	1
23	HP Deskjet Printer	1
24	Web Camera	1
		2

Projects:

Dr Shri Ram has been awarded with a travel grant project on “*Services Quality Assessment of Higher Education Institution Libraries*” supported by Indian Council of Social Science Research (ICSSR) and National Research Council of Thailand (NRCT) and Dr. Shri Ram visited Thailand during the period January-February 2016 for this project.

Publication:

Book Chapter(s) :

Shri Ram (2015). Library Services and Resource Utility as a Measure of Student Success. In Suresh Jange, *Quality and Excellence in Librarianship* (pp. 141-153). Dharwad: Sarpan Prakashana. [ISBN : 9788193177150] .

Journal(s) :

Shri Ram, Nitin Paliwal (2016). Management of University Research Publication: A Case Study of JUIT Publication Database (JPubDB). *DEDIDOC Journal of Library and Information Technology*, 36 (4), 212-219.

Shri Ram (2016). A quantitative assessment of “chikungunya” research publications, 2004-2013. *Tropical Journal of Medical Research*, 19 (1), 52-60.

Shri Ram (2015). Global Research Productivity in the Field of Dermatoglyphics: A Quantitative Assessment of 50 Years of Journal Article Output. *Science and Technology Libraries*, 34 (3), 257-371.

Conference(s) :

Shri Ram, Sanjay Kataria, John Paul Anbu K. (2015). Bibliometric Study of the Literature on Ebola Virus Research. *Proceedings of the International Conference on Webometrics, Informetrics, and Scientometrics* [11: New Delhi : 26-28 November 2015], pp.75-81.

Shri Ram (2015). Scientometric perspective on global Research in Cholelithiasis (gallstones). *Proceedings of the International Conference on Webometrics, Informetrics, and Scientometrics*, [11: New Delhi : 26-28 November 2015], pp.391-402.

SCIENCE AND TECHNOLOGY ENTREPRENEURS' PARK (STEP)

STEP

KISAN MELA: Science & Technology Entrepreneur's Park (STEP) participated in Kisan Mela at KrishiVigyan Kendra, Rauni (Patiala) organized by Punjab Agricultural University, Ludhiana. On 18 September, 2015, Dr. Jyoti Rani (Asst. Professor), Ms. Prerna (TA), Ms. Ravneet Kaur (TA), Ms. Jyotika (TA), Mr Jagdeep Singh (Project Fellow, STEP), Mr. Pawan Kumar (helper) and two students of B.Tech Biotechnology Aakash and Pankesh also attended and showcased products developed at STEP. Overall interacted with nearly 100 farmers and briefed them about benefits of organic farming and facilities at STEP.

What Makes An Entrepreneur? To spread awareness about entrepreneurial skills and to develop entrepreneurship as a career option among students an event was organised on what makes an entrepreneur. An invited talk by Mr. Harinderpal Singh Lamba (Managing Director) Beverly Beverages, Patiala and Ms Sahiba Dhandhania (Co-Founder), Purple squirrel was delivered on October 15, 2015 in Convention Hall. Approximately 100 students participated.

HPTLC Workshop: Workshop on HPTLC was organized on December 2, 2015. Around 15 students participated in the workshop. The students were mainly from Punjabi University, Thapar University and IIT, Roorkee. An invited talk by Dr. Sharad Medhe, Assistant Lab Manager, ANCHROM Lab, Mumbai and by Mr. Rakesh was very knowledgeable.

KISAN MELA : Science & Technology Entrepreneur's Park (STEP) participated in Kisan Mela at Krishi Vigyan Kendra, Rauni (Patiala) organized by Punjab Agricultural University, Ludhiana on 11th March 2016, Dr. Jyoti Rani (Asst. Professor), Ms. Simarpreet Kaur (PhD scholar), Ms. Ishtpreet Kaur (PhD scholar), Ms. Nitika (MSc.), Mr. Chandan Bhandari (Lab Technician), Mr. Surinder pal (helper) attended and showcased their products. In Kisan Mela STEP got an opportunity to interact with around 65 farmers.

Conduct of practical: The practical of various subjects of B.Tech and M.Sc students are conducted here which include (PBC 301) nutrition and clinical biochemistry, (UBT 302) food science.

On April 23, 2015, a practical demonstration was given on manufacturing of soya milk and soya paneer was given to the students of M.Sc Biotechnology (I year) as a part of their practical on a course on Food processing. The students got the feel of pilot scale manufacturing and entrepreneurial opportunity in this field.

Project Training and Skill Development of students from Thapar University

Nitika: She completed her M.Sc dissertation entitled “Screening and characterization of Lactic acid producing bacteria from various samples” and isolated bacterial strains which could utilize xylose and lignocelluloses biomass for the production of Lactic acid.

Swati: She completed her M.Sc. dissertation on effect of different Pesticides on cyanobacterial physiology and its degradation by *Anabaena variabilis* and *Desmonostoc* so that it can be used in biofertilizer technology program.

Vandita: She completed her M.Sc. dissertation entitled “Production of yeast biomass from different agricultural wastes using *Saccharomyces cerevisiae*”. The study was focused on using various wastes like fruit/vegetable peels, straw and bagasse as substrate for cultivation of yeast after hydrolysis.

Navreet Kaur: She completed her M.Tech dissertation entitled “Extraction of amla juice by mechanical and enzymatic method” which was focused on the determination of tannin content, flavonoid content, protein content, antioxidant activity, antimicrobial activity, antifungal activity and vitamin C content of fresh amla and processed amla products and to quantify the flavonoid content by HPLC method.

Simarpreet Kaur: She is doing her PhD and working on “Lactic Acid production from lignocellulosic biomass”. The main focus of her study is utilization of lignocellulosic biomass comprising of agricultural wastes, for production of some value added compounds like organic acids and develop a prototype for large scale conversion.

Ishtpreet Kaur: She is doing her PhD and studying the effect of cartap hydrochloride which is an insecticide commonly used in paddy cultivation to control stem borer an insect pest on cyanobacteria of paddy field, since these are used as biofertilizers and for developing a sustainable pest management practice.

Project under DST Fast Track Young Scientist Scheme: Dr Ravi Kant Dhiman, Principal Investigator, working since May 2014, carried out field surveys and reported *Malaxismuscifera* and *Spiranthes sinensis* from Fagu, near Shimla (H.P.). The survival threats were studied and conservation measures were taken. Seeds and other explants like pseudobulbs were collected and inoculated on media.

11th Summer Project Training: 8 students of B.Tech and M.Sc from Punjabi University and Guru Granth Sahib World University were registered for summer project training from June 01, 2015 to July 8, 2015. Training in Industrial Microbiology & Biotechnology, equipment handling, basic techniques in molecular biology and fermentation technology was imparted. Dr. Dinesh Goyal and Dr. N. Das coordinated the training with the support of PhD students Ms. Prerna, Ms. Simarpreet Kaur, Ms. Ishtpreet Kaur and M.Sc students Nitika and Swati.