



THAPAR INSTITUTE
OF ENGINEERING & TECHNOLOGY
(Deemed to be University)

PULSE



ENGINEERING | SCIENCES | MANAGEMENT | LIBERAL ARTS

DISCOVER *Countless*
POSSIBILITIES
THAPAR INSTITUTE OF ENGINEERING & TECHNOLOGY

VOLUME- 16

Rankings (NIRF and THE) and Accreditation



NAAC A+
Accredited A+
by NAAC



#28
Engineering
Category



#31
University
Category



501-600
Bracket in
THE World University Rankings



#127
THE Asia Ranking
Ranked #7th in India



301 - 400
Bracket in Computer Science in
THE World University Rankings
by Subject 2022



Engineering – Electrical &
Electronic: 451-500 bracket.
Computer Science & Information
Systems: 601-650 bracket



Accreditation Board for Engineering
and Technology Accredited Program



National Board of Accreditation
Accredited Department

“Eligible programs are NBA and ABET accredited”

Expert Opinion



Prof Sanjeev Bedi

NSERC Chair in Immersive Design,
University of Waterloo



A. S. Jawanda

Associate Professor
Department of Mechanical
and Mechatronics Engineering

(A) Experiential Learning in Civil Engineering

By Dr Sanjeev Bedi and Ajayinder Singh Jawanda

Civil Engineering was the first program formerly taught in an institutional setting. The first curriculum was taught by practicing engineers who took time from their assignments to teach students, drawing heavily on their practical experience. That emphasis on learning based on experience was the key to establishment of a great railway network, an equally building roads, canals, and dams. In time, however, education grew, and the need for many engineers required a large number of practicing engineers. As practicing engineers to teach were not available, professional teachers took their place. Today most teaching is done by experienced teachers. Many of the readers of this article are an outcome of this new model of education. Despite its success, a key weakness is a shrinking exposure to real-world, hands-on design experience among our graduating engineers.

Civil Engineering at TIET has taken this challenge seriously and in the recent past have launched several successful initiatives in collaboration with the Experiential Learning Center (ELC). The student activities have rejuvenated the student base and awakened interest in design. Some of the experiences provide a preview of benefits to students and are discussed below.

Concrete Canoe: The students in the first year are challenged to design a canoe using concrete. The weight and porosity of the concrete pit is used as a building material for boats against the physics of buoyancy and strength. The students love the challenge, and some come up with unique concepts. Further, many students, still freshmen, have not formally been taught reinforced concrete concepts and must self-learn them, a trait that is useful in life. Lastly, the thrill of competing with friends creates an environment rich in experimentation, decision making, academic conflict, self-learning and self-doing, teamwork, and much more. Perhaps in coming years we should make an alumni event around the activity.



Single Storey House: Housing is a challenge in India, and low-cost housing is the need of the day. At Thapar, we decided to expose the students to the challenges of building a low-cost house by actually designing, sourcing and then building a house. Finally, to emphasize the role of design, we tested the house by subjecting it to design loads and more until it broke. The thrill of the activity was evident as many students stayed behind even after graduation to complete the activity. The students also get to design their own sustainable dream house using Revit software. This exposure is intended to get them to think like engineers in solving a multi-constraint problem.



Steel Shed: Steel structures are common in the industry. Our students are given the challenge to design, source, and build a structure to specified needs. The design forms part of a course project, and the required tools, standards, and software are provided along with faculty time.



Water Filtration Plant/Rainwater Harvest Well Design: In the second year, the students are given a challenge on water management for a sustainable environment. The design of a water filtration unit or rainwater harvesting and groundwater recharge well are challenges that enrich the students' appreciation for a sustainable freshwater management system.

Intersection Design: Road intersections are experiences that can be nightmares or pleasurable experiences. The design of an urban road intersection is a challenge given to civil engineers in the third year. They learn to work with urban planning and traffic prediction models, simulation software, and design validation of design using real-time intersections.

These are among the new initiatives introduced by the Civil Engineering Department to build fascination, context, interest, problem-solving capability, teamwork ability, the opportunity for presentation, and meaningful

report writing. The work has been done as part of our experiential learning initiative, and we look forward to integrating these initiatives with our curriculum in the coming years. These initiatives also have the potential for increased interaction with our alumni, and we would love to hear from you about your thoughts.

(B) Experiential Learning in Mechanical Engineering

By Dr Sanjeev Bedi and Ajayinder Singh Jawanda

The Mechanical Engineering program at TIET had access to some of the best laboratories in the country. The workshop allowed many budding engineers to build prototypes, models, and even their first machines. Many of you will remember these with fondness and nostalgia. The software revolution has awakened engineering education from the practical and hands-on realm. However, such talent is still the mainstay of the industry. This article speaks to the initiatives taken by the Mechanical Engineering department to update and upgrade student exposure to all things practical.

Many readers may remember the first day of their first job. They were nervous and unsure of the job requirement, preparedness, ability, the industrial environment, and the future. During the first few days, they might have heard words and terminologies like “thou,” “burr,” “grease nipple,” etc., and were unsure of what it meant but were scared to ask lest their boss developed a poor impression of you. Rolling the clock forward, they learned the workplace’s vocabulary in a few months and were comfortable with the design constructs. In another few months, they connected the design constructs to classroom learning and established themselves as contributors making themselves indispensable. This progression of learning the vocabulary, exposure to design constructs, links to domain knowledge, and ability to think about a problem, design, and test solutions is the pedagogy we have adopted as we expose our students to real-world engineering.

In Mechanical Engineering, we expose the students to the automotive and machine design sectors through bicycle and engine dissection. First, the students take apart a bicycle and see sprockets, bearings, balls in the bearings, fasteners, and much more from the over 1000 components in the bicycle. The students see how shafts are built, bearings installed, and fasteners used. These design constructs stay with them for life. The bike is subsequently assembled and used in a test. The test is designed to showcase the importance of validation. The students are subsequently given an exercise to design a human-powered travel aid for a person with specific disabilities. Students use the newly acquired knowledge to attempt to design a new product. Their first exposure to design. The bicycle dissection has been used in the curriculum for the past five years



Many Mechanical Engineers develop careers in the automotive sector. It is safe to say most students choose Mechanical Engineering because of their interest in automobiles. We developed the “engine dissection” activity to expose them to the automotive industry. The students disassemble an engine, see a crankshaft, pushrod, rocker arm, governor, and much more for the first time. The interaction of the students with professors and invitees provides exposure to tolerances, quality control, defect detection, automation, and much more. The students then assembled the engine and tested it to validate the assembly. The students are then asked to design the interface for attaching a pump to the engine and the frame around them.



Mechanical Engineering covers many disciplines. To expose students to thermal applications, an activity around the design of a plate heat exchanger is offered in the third year. First, the students design the heat exchanger in CAD. Second, the design components are fabricated and assembled, and lastly the prototype is tested for performance and efficiency. Students build various designs; all focused on different but relevant thinking. Some design the longest path to follow for good heat exchange; others use baffles to create turbulence and

much more. In addition to the activity, the students do their own design and get to see the results of various thinking and their outcome.

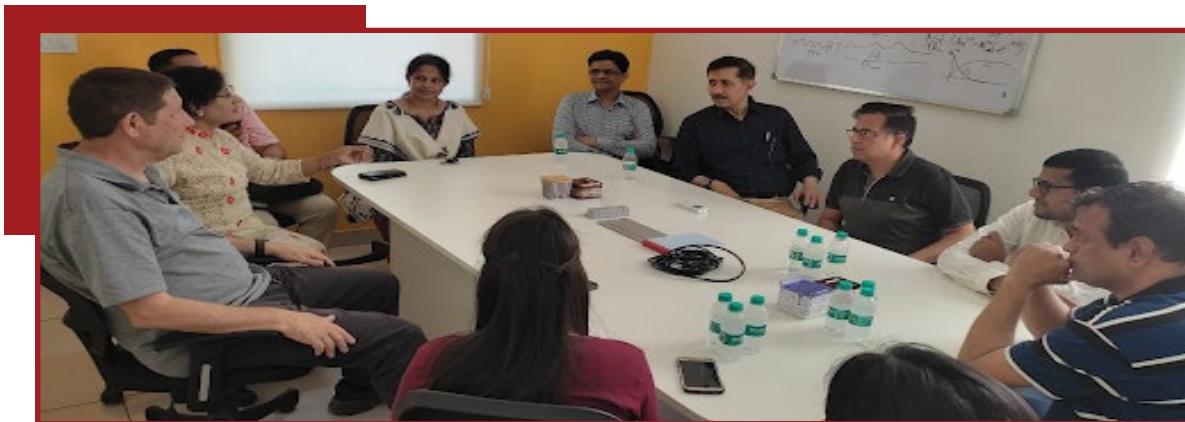
As part of the experiential learning initiative, it is our goal that students design and build their first machine before they graduate. We have developed a thread of activities to enable this goal. The students are exposed to the design of a 2-axis NC table which they learn to control, and are exposed to linear bearings, ball screws, shaft couplers, aluminum extrusions, and much more. Next, they use this knowledge to design A Chair Testing Machine. The design exposes them to pneumatics, PLC control, and sensor integration. The introduction to new vocabulary, design constructs, and links to domain knowledge in a few industrial sectors prepares our students to be better fit for the industry.

The students have well received an introduction to experiential activities. We are developing new activities to avoid current ones from becoming stale. We plan to introduce a Go-kart design and build it into our program. As the activity is introduced, it will eventually be enhanced to become an autonomous Go-kart. Such activities take time to develop, but the student response makes it all worthwhile.

Centre of Excellence for Food Security

Visit of Prof Yosi Shacham Chair Professor and International Director, TIET-TAU Center of Excellence for Food Security (T²CEFS)

Prof Yosi Shacham, Chair Professor and International Director, TIET-TAU Center of Excellence for Food Security (T²CEFS), visited the Center in TIET, Patiala. During his visit, he chaired high-level meetings with the TIET management briefing about the future collaboration with IMEC Netherlands. The mission at IMEC Netherlands is to develop targeted innovations with a real impact on people's lives.



IMEC joins forces with research institutions, governments, and businesses to leverage its world-leading R&D for high-impact nano and digital technology projects. The international IMEC organization boasts more than 5,000 expert scientists, a unique infrastructure that includes a 2.5 billion Euro 300mm semiconductor pilot line, and an ecosystem of more than 600 world-leading industry partners, and a global academic network.



In various regions, global technology leadership is combined with local experience and expertise to engage projects that address some of the most crucial challenges we face today.

All the principal investigators, Prof Parteek Bhatia, Dr Amit Mishra, Dr Karun Verma, Prof Amit Dhir, Dr Sandha, Prof Moushumi Ghosh, Prof Rajesh Khanna, Dr Sushma Jain, Dr Jhillik Bhattacharya, presented their progress of the ongoing projects of the Centre of excellence in the review meeting before Prof Yosi Shacham, Mr R Vederah (CBoG) Prof Prakash Gopalan Director, TIET and Prof Padam Kumar Nair (Director, LMTSoM) and Prof Ajay Batish, Deputy Director. He visited PAU with Prof Ajay Batish (Deputy Director) and Prof Moushumi Ghosh (Coordinator T²CEFS) and met the Additional Director of Research, Dr Ajmer Singh Dhatt, and all the Project Collaborators. Prof Yosi Shacham profiled a series of mechanisms by which collaborations can be energized and made more productive. He extended with an example of the scope of cooperation in data collection or capturing images with a hyperspectral camera mounted on Drone by PAU and subsequent image/data analysis by data scientists experts from TIET.

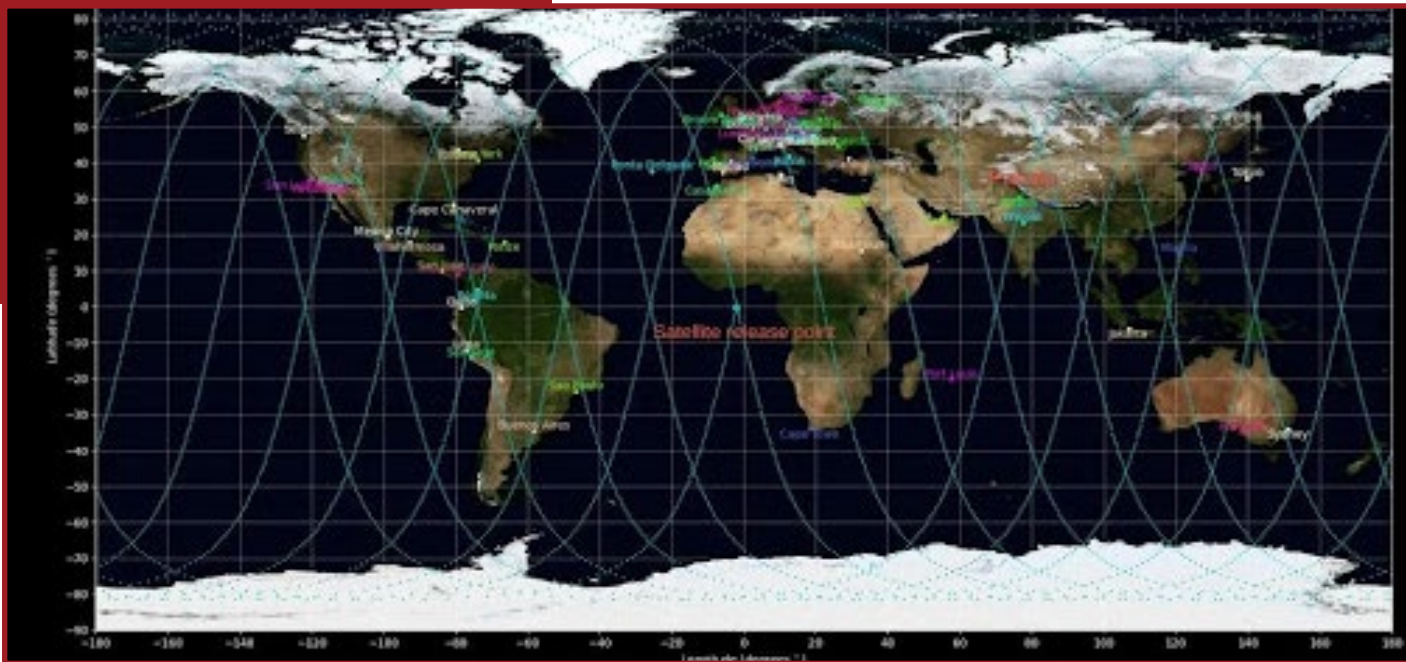
Prof Yosi, a highly reputed scholar, also chaired and convened several sessions with the multidisciplinary team of scientists and project fellows at T²CEFS to deliver cutting-edge solutions to critical issues in food security. Prof Yosi Shacham visited the site where the ongoing project 'Enhanced treatment of wastewater using a synergy of microalgae and microorganisms' - without energy investment and biofuel production is piloted. The project investigators are Prof Amit Dhir and Dr Sandha (TIET), Prof Hadas Mamane (TAU), and Dr G S Kochar (PAU). His visit provided a great impetus to the ongoing collaborative research with Tel Aviv University and Agriculture Research Organization (ARO), Israel and it will further strengthen the unique joint endeavors of the centre further, in channelizing the outcomes for the best benefit of the country.

Thapar Student Satellite Project (ThaparSat)

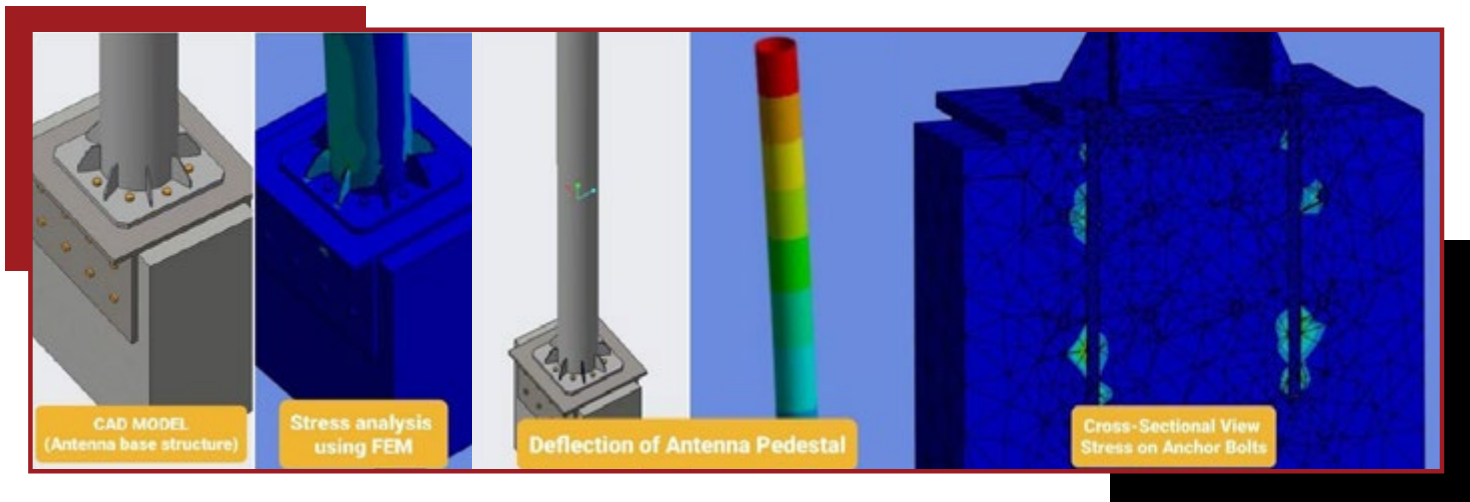
It is indeed an exciting time for the ThaparSat team as we enter the completion stage of our satellite monitoring station, one of its kind in north-India. ThaparSat aims to monitor the greenhouse gases like Carbon dioxide (CO₂), Nitrous Oxide (N₂O), and Methane (CH₄), along with the measurement of moisture content in the atmosphere over the Indian subcontinent. The payload is designed with the capacity to measure the absorption spectrum at a pre-decided location in its orbit. Highlights of the activities in recent past are:

Highlights of the activities:

Satellite orbit simulation was completed by the student team lead by Pranav Seth (Civil Engineering, 7th Semester) under the mentorship of Dr. Mamta Gulati (School of Mathematics). Simulations predict the orbit of the proposed satellite based on the location of the monitoring-station.



Structural design testing of base plate for mounting the antenna of the monitoring station was completed by 5th semester, Mechanical Engineering students- Pradyun Sharma and Tushar Singh under the mentorship of Dr. Vineet Srivastava (Department of Mechanical Engineering).



Team of five students from the department of Electronics & Communication Engineering and the department of Mechanical Engineering participated in a one week industrial training at the M/S Data Patterns, Chennai from 27th June, 2022 to 1st July, 2022. Their training included the fabrication and testing of the electrical & mechanical structure of the monitoring station and satellite sub-system.



Placements 2022

“Success comes to those who are willing to launch towards their goals with no guarantees of success and persist when there is every reason to give up”

(i) UG Placements Record 2022

Thapar Institute’s students welcome the rebounding economy with excellent placements.

UG PLACEMENTS 2022 HIGHLIGHTS			
PLACEMENT PACKAGE RATIO			
Package	INR 15-19 laks	INR 20-25 laks	INR >25 laks
Number of Students	250+ Students	25+ Students	20+ Students
OVERALL PLACEMENT RECORDS 2022			
Placed	#Offers	Max CTC (INR Lakhs)	Average CTC (INR Lakhs)
1547	1775	100.00+	9.32

(ii) Placements at Amazon and Google

Thapar Institute of Engineering & Technology inspires students to find their passion and build impactful careers. Students from the Computer Science program brought laurels to the institution through their placements with global tech leaders.



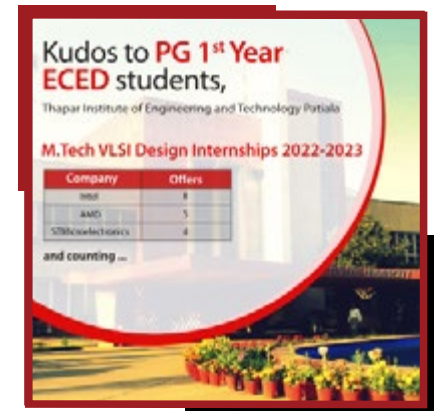
(iii) Placement at Intel

After completing her MTech in VLSI Design from TIET, Patiala, Ashima joined PhD under Dr Alpana Agarwal (Professor, ECED) and Dr Anil Singh (Assistant Professor, ECED) at TIET. She was a recipient of the CSIR fellowship and was a prime contributor to the Design of All Digital Flash ADC under SMDP-Chip to System Design (SMDP-C2SD) project. We are proud of Ashima to get placed at Intel as the Analog and Mixed Signal Design Engineer.



(iv) MTech VLSI Design Internships 2022-2023

This placement year is proving to bring about phenomenal opportunities for our students. With big brandnames such as Intel, AMD, and STMicroelectronics under our scope of expansion, our PG 1st year ECED students are bagging great internships.



(v) Civil Engineering Placements- Post Graduation (ME)

We are proud of our Civil Engineering- Post Graduation (ME) students for getting placed in reputed companies and soaring high towards a brighter future.

	NAME	BRANCH	COMPANY
	Rohan Kumar	ME Infrastructure Engineering	Macquart
	Apoorv Sharma	ME Structural Engineering	L&T Construction
	Arvind Verma	ME Infrastructure Engineering	G-Eng Advisory Services Pvt Ltd
	Anuj Chaudhary	ME Structural Engineering	SP Singa Construction Pvt Ltd
	Amiya Kumar Thakur	ME Infrastructure Engineering	Macquart
	Ujjay Ujjay	ME Structural Engineering	Quality Council of India

	NAME	BRANCH	COMPANY
	Iwan Ashraf Wasi	ME Infrastructure Engineering	Quality Council of India
	Shivam Bharzava	ME Infrastructure Engineering	G-Eng Advisory Services Pvt Ltd
	Ishan Sharma	ME Infrastructure Engineering	L&T Info Engg Ltd
	Sheerath Saptha	ME Structural Engineering	Jacobs
	Kamakhya	ME Infrastructure Engineering	L&T Construction
	Shivani Nagaraj	ME Structure engineering	Macquart

	NAME	BRANCH	COMPANY
	Kunal Mohindar	ME Structural Engineering	SP Singa Construction Pvt Ltd
	Chiruv Geer	ME Structural Engineering	Quality Council of India
	Rishi Singh	ME Structural Engineering	L&T Construction
	Souvik Singh Gumberia	ME Structural Engineering	SP Singa Construction Pvt Ltd
	Rahul Sharma	ME Structural Engineering	SP Singa Construction Pvt Ltd
	Shahrukh Seem	ME Structural Engineering	Quality Council of India

(vi) MTech Placements

Our students Arshdeep Kang, Arush Maski, Mohammed Abdul Mannan, and Yash Bhardwaj started a new beginning of their bright futures by getting placed with reputed companies.

	NAME	BRANCH	COMPANY
	Arshdeep Kang	MTech (EST)	Jacobs Solutions India Pvt. Ltd.
	Arush Maski	MTech (EST)	Vardhman Special Steels Ltd.
	Mohammed Abdul Mannan	MTech (EST)	Burns & McDonnell Engineering India Pvt. Ltd.
	Yash Bhardwaj	MTech (EST)	Century Playboards (India) Ltd.

Research at TIET

(A) Diagnosis of Breast Cancer using Antennas and Microwaves:

Ms Gagandeep Kaur (PhD student, ECED) and Dr Amanpreet Kaur (Sr)(Assistant Professor ECED) have published five SCI research papers on the Diagnosis of Breast Cancer using Antennas and Microwaves. Their research focuses on using Antennas (Monostatic Radar) to construct a dielectric profile of the breast phantom under scan, which helps distinguish tumorous tissue from healthy tissue.

The outcomes of this research are as follows-

1. Successful diagnosis of tumor (up to 5mm radius) in a breast phantom completed with 95% accuracy.
2. Breast tumor diagnosis accomplished with Microstrip antennas and Dielectric resonator antennas in a monostatic radar-based configuration.
3. Cost-effective and handy technique developed for a successful diagnosis of breast cancer.

(B) Development of Bacteriabots to reduce the side effects of chemotherapy

Cancer remains one of the most common causes of death throughout the world. Bacteriabot is one approach that can overcome some of the limitations of chemotherapy and reduce the side effects of conventional chemotherapy. After two years of research, Dr Diptiman Choudhury, Dr Neha Garg (Banaras Hindu University, Varanasi), Dr Biswarup Basu (Chittaranjan National Cancer Centre, Kolkata), and Dr Abhrojyoti Ghosh (Bose Institute, Kolkata) curated a way to reduce the doses of chemotherapy. The work was also published in Science Advances. The first preclinical trial has been completed and is yet to achieve its target in the coming days.



(C) Designing and Building a Robotic Arm for 3D Printing Building

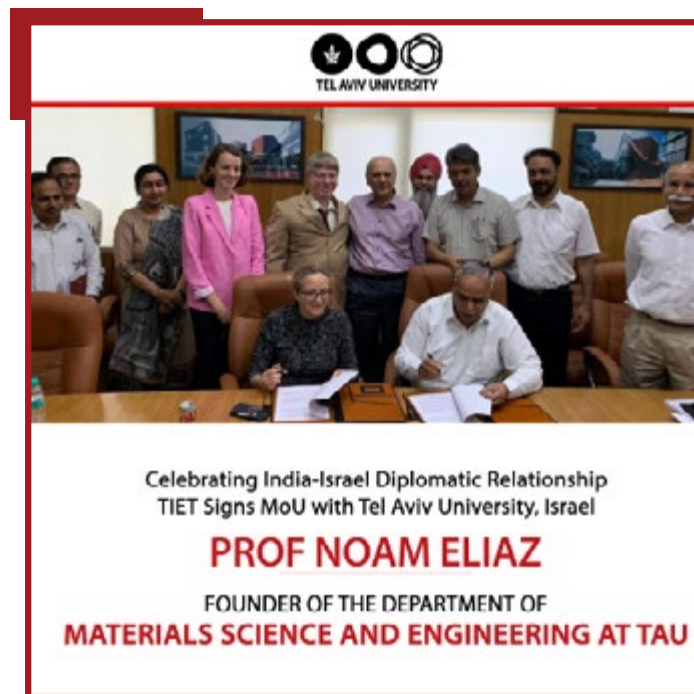
A team consisting of Dr Shweta Goyal (CED), Dr Naveen Kwatra (CED), and Dr Tarun Kumar Bera (MED) have received two projects entitled “3D printing of Buildings with Appropriate Concrete Mixes Using Gantry Robot” from DST SERB worth Rs 19,80,000 and “3D printing of Buildings with Appropriate Concrete Mixes Using 6-Axis Robotic Arm” from La Foundation Dassault Systemes worth Rs 24.1 Lakhs. The objectives of the two projects are to design and build a robotic arm for 3D printing buildings, as well as to design the GRBL controller for precise arm movement and to obtain an optimal material mix design for efficient 3D printing of buildings.

International Collaborations

Thapar Institute’s unique collaboration and global partnerships give students a flavour of international educational experience, prepare them for professional careers, and expose them to state-of-the-art facilities and cutting-edge research in the fields of engineering and science.

(i) Tel Aviv University

TIET and Tel Aviv University have agreed to jointly build a collaborative research center – the Thapar-Tel Aviv University Center of Excellence in Advanced Manufacturing. Prof Noam Eliaz serves as the Inaugural Chair Professor. The Center will draw multidisciplinary TAU and TIET research teams with expertise from all fields of engineering and sciences.



Prof Prakash Gopalan, Director TIET, signed a five-year Memorandum of Agreement with Prof Millette Shamir, Vice-President (Global) of the Tel-Aviv-based Tel Aviv University International, in the presence of R R Vederah, Chairman Board of Governors of Thapar Institute. This year India-Israel is celebrating the 30th Anniversary of establishing diplomatic relations between the two countries.

(ii) University of Toledo

Dean of Engineering and Dean of Natural Sciences visited the TIET campus on May 13, 2022. Six students were transferred to the Bioengineering program in August 2022. All students were awarded scholarships of US\$ 8500 per year.



(iii) University of Leeds, UK

Prof Rajeev Mehta, Dr Avinash Chandra, and Dr Neetu Singh (Department of Chemical Engineering) visited the School of Chemical and Process Engineering (SCAPE), University of Leeds, during May 23-27, 2022, to strengthen the collaboration between TIET and SCAPE. During the visit, the team discussed the articulation agreement regarding BE [2+2] and BE+MS [4+1].

The UG, PG, and research labs were visited to advance our laboratories at CHED and TIET. Of particular interest were the detailed UG laboratories experiments write-ups, the practice of evaluation in the same laboratory session, etc.

A couple of sessions were devoted to discussing the Capstone Project execution, monitoring, and assessment to improve our conduct of the same. SCAPE has shared the procedural documents of the capstone project execution with the team as the benchmark (including their students' submitted capstone project reports) for monitoring and evaluation purposes.

The team also visited the state-of-the-art characterization facilities at their New Bragg Center, and the host agreed to extend their support to use their extensive characterization facilities. Our team interacted with the various professors at SCAPE, and the overlapping research interests were identified for future research

collaborations. They were enthusiastic about the joint research projects, PDFs (for faculty from TIET), and joint PhD. Dr Jereme (Research and Innovation Manager) briefed about the possible funding agencies for collaborative international research proposals such as AYRTON, UK PACT funding, etc. During the concluding meeting, it was proposed by the Head of SCAPE, Prof Shang Dai, that there should be a review meeting after every 3-6 months.



In frame from left to right: Dr Avinash Chandra, Dr Rajeev Mehta, and Dr Neetu Singh at University of Leeds (UK)

(iv) Visit to the University of Manchester (National Graphene Institute)

National Graphene Institute (NGI) at the University of Manchester is a world-renowned facility devoted to graphene research. The visit of Dr Rajeev Mehta to the NGI was made possible by Dr Rik Brydson, Director of Research at the University of Leeds. Dr Mehta was briefed and taken on a tour of the five-floor graphene facility by Professor Aravind.

Overall, the visit to the University of Leeds (and University of Manchester) was very successful and laid a solid foundation for subsequent collaboration. TIET's Chemical Engineering program will benefit substantially from this visit's learning.

CENTER FOR ACADEMIC PRACTICES AND STUDENT LEARNING (CAPSL)

Under the current contemporary curriculum at TIET, CAPSL (Centre for Academic Practices and Student Learning) began operations in 2016 in partnership with Trinity College Dublin. This new direction program's primary goal is to inspire and prepare the lecturers from diverse departments to excel in their instruction by switching from teacher-centric learning to student-centered learning. The program's primary goal is to help faculty members develop professionally by providing them with training through various modules, showcase events, Community of Practices (COP), expert sessions, etc. After finishing the introductory module, interested faculty members are also sent to Trinity College Dublin to continue their advanced module education. The instructors for the trainee faculty are the professors who have finished the advanced courses.

CAPSL ADVANCED PROGRAM, held from APRIL 27 to JUNE 9, 2022

MODULES OFFERED IN THE PROGRAM

- Assessment for Higher Level Abilities of Bloom's Taxonomy
- E-Content & Authoring Tools
- Teamwork and Collaboration
- Designing Effective Course for Significant Learning
- Teaching Philosophy Statement



48 faculty members of various cadres participated in CAPSL Advanced Program

Students' Corner

(i) International Data Analytics Olympiad (IDAO) 2022

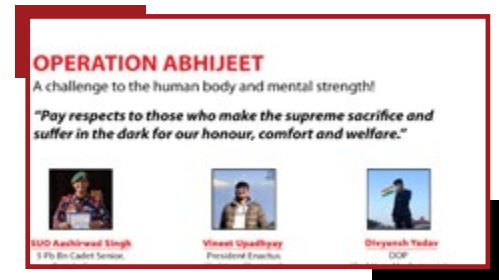
The team of Naman Tuli and Avik Kuthiala competed in the qualifiers of the International Data Analytics Olympiad (IDAO) 2022, conducted by HSE University in Moscow, and bagged the 2nd position worldwide. The Olympiad had two tracks and attracted more than 5000 participants from 97 countries.

(ii) Operation Abhijeet

Operation Abhijeet consisted of the Cyclathon of 2000 km bicycling and running route from Patiala to Drass, Kargil War Memorial, which was to be covered in one shot. The training was provided under the supervision of S F



Instructors. The mission got a commendation from Col N S Kalsi, Commanding Officer, 5th Pb Bn, and Director Prof Prakash Gopalan of TIET. SUO Aashirwad Singh was responsible for all the risks, including life and death sites en route.



(iii) HackPrinceton

HackPrinceton is a Global 36-hour Hackathon organized by Princeton University, USA, annually with approximately 600 participants after shortlisting from all around the world and has very high merit among the technical community. A team from TIET participated in HackPrinceton 2022, held from 1st - 3rd April 2022, and won the Best Design category in the competition.



(iv) Minus Zero - India's first startup for fully self-driving cars

Minus Zero raised \$1.7 million in a seed round led by Chiratae Ventures. JITO Angel Network, a few US-based senior executives from NVIDIA, and Lyft also participated in the round. Founded by Gagandeep Reehal (3rd-year Computer Engineering) and Gursimran Kalra, the startup became the first company last year to test a driverless car on a public Indian road, a feat which was covered by Forbes India, BBC News UK, YourStory, etc. and was a global finalist in the E & T Innovation Awards 2021 by IET, London, and won Special Mention at the NASSCOM AI Game changers Awards 2021.



(v) Apple WWDC22 Swift Student Challenge

Among more than 350 students from 40 countries, our student, Jaskaran, won the Apple' WWDC22 Swift Student Challenge' for showcasing his extraordinary coding skills.



(vi) Paper Published by the UG students

Computer Science Engineering department students made us proud by getting their paper published in the top tier Q1 Indexed Journal.



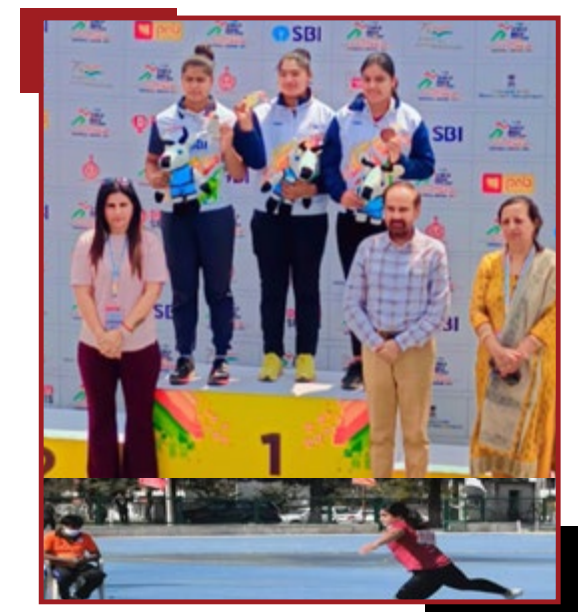
(vii) Cash Rewards at ION<athon>

The team comprising Apoorv Mishra, Ritik Puri, Jashandeep Singh, and Arnav Agarwal, under the guidance of Dr Harpreet Singh and Dr Prashant Singh Rana, bagged the prize of Rs 2,00,000 for their project - God's Eye (AI-based Spectacles for visually impaired people), at ION<athon>



(viii) Sports Achievement

Ramneet Kaur won a bronze medal in Khelo India Youth Games in the Shot Put event (A National level Tournament), bringing us pride.



(ix) Paper published in International Workshop

Our students published a paper in the International Workshop on Semantic Evaluation (SemEval) associated with NAACL. Atharvan Dogra received grants for presenting the research paper on Leveraging Concatenated Word Embeddings for Named Entity Recognition at the conference.



(x) Second prize for a research article published in The Indian Concrete Journal

Our students Himanshu, Purnima, and Ashish's research articles on "Performance of Organic and Inorganic Functional Groups as Corrosion Inhibitors in Concrete Experiencing Extreme Corrosive Environment," has been awarded by the Indian Concrete Journal (ICJ) as the Best Paper – 2021 under the mentorship of Dr. Shweta Goyal. The research objective was to increase the service life of reinforced concrete structures by using corrosion inhibitors of different classes.



Alumni Corner

A) Events

(i) Alumni Meet, Chandigarh

An alumni meet was conducted at DSOI in Chandigarh. Around 130+ alumni attended the meet, out of which 87 were TI graduates who have retired or are currently serving the defence forces of the country. Two lady officers also attended the event. Dr Sundar Singh Sir made the opening welcome statement on behalf of the Bangalore Chapter. The Chief Guest, Dr Batish, spoke about the institutes and the growth it has made over the last five years and the vision ahead. He also shared how Alumni can contribute towards building the perception of their institute. He encouraged the alumni to get involved with their alma mater and make contributions.

Student representatives presented Bouquets to the Chief Guest, and then he spent time with each alumnus, listening to their feedback and concerns. Col Chaudary addressed the gathering and highlighted the ultimate sacrifice made by one of our Alumnus, Lt Gurlqbal Sandhu of the 1971 batch during the Indo-Pakistan war. Lastly, the "Thank You Note" was presented by Dr Vinod Vashist; the Chief Guests, Dr Batish, Dr Nair & Dr Bedi presented Mementos to Defense Officers at the occasion and a gratitude award to the organizing committee.



(ii) Alumni Meet, Bengaluru

An alumni meet was held at ASC Golf Club in Bengaluru. Around 150+ alumni attended the meeting and provided valuable feedback and suggestions for the betterment of Bengaluru Chapter. The organizations committee members under the leadership of Ms Renu Khanna, were also present. Representing the Bangalore Chapter, she made the opening welcome statement to address the audience. Professor Prakash Gopalan, the Chief Guest, spoke about the institutes and their growth it has made over the last five years, and the vision ahead. He also discussed how Alumni could help shape their institute's image and encouraged them to get involved with their alma mater and contribute. The Chief Guest spent time with each alumnus, listening to their feedback and concerns. Mrs Sagar greeted the Chief Guest with flowers. Mr Sagar, an alumnus & member of the first graduating class, reflected on his time on campus and spoke about how the institute helped him in his career and life by instilling values and honesty. Wing Commander DP Sabharwal addressed the audience, emphasizing the importance of engaging with the institute. In addition, Chief Guest Professor Gopalan presented Mementos to Defense Officers, present at the occasion, the first 25 registrations for the event, and a gratitude award to the organizing committee at the event.

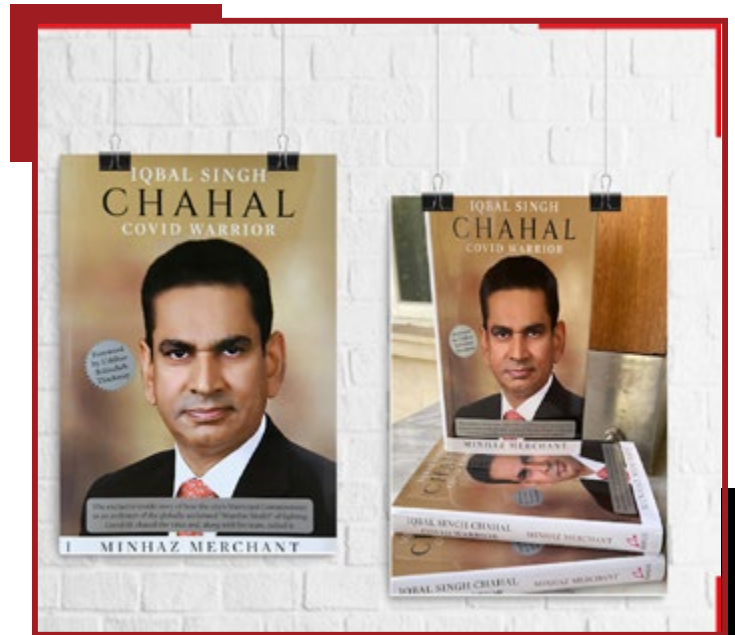
The event in Bengaluru was a massive success in terms of connecting and networking alumni and current officials. Following that, the Alumni and guests enjoyed live army band singing. The after party following the meet resulted in amazing and nostalgic interactions among the alumni, contributing to the success of the Alumni Meet!



(B) Alumni Achievements

Iqbal Singh Chahal

Our alumni, Iqbal Singh Chahal, a 1989-batch IAS officer, currently posted as the Municipal Commissioner of Greater Mumbai, was honored for his “exemplary COVID management in Mumbai” as the Chief of Brihanmumbai Municipal Corporation. The book (Iqbal Singh Chahal - COVID Warrior) is authored by Minhaz Merchant, a highly credible and distinguished editor and publisher, who is respected globally. The book is available on all online platforms and in major book shops.



Events at TIET

(i) SCI fest

After a Covid-compelled break for the last two years, the School of Physics and Materials Science, School of Chemistry and Biochemistry, School of Mathematics, and Department of Biotechnology of Thapar Institute of Engineering & Technology, Patiala jointly organized the annual science festival as SCI-FEST 2022 on June 7, 2022. Ten prominent colleges in the region participated with their selected undergraduate science students and teachers.



There were quiz competitions in four categories: Physics, Chemistry, Mathematics & Biology, and a poster presentation cum competition. Given the enthusiasm among the participants, a general quiz competition was also organized for all the participants. Winners of all the events were facilitated. Professor Amjad Ali delivered an interactive talk on “Career in Sciences.”



The participants visited the state-of-the-art laboratories of the schools & departments and other facilities on the TIET campus. They interacted with the faculty members and research scholars of TIET. Nearly 200 participants, with a significant fraction of girl participants, participated in the one-day event that witnessed a healthy competition and scientific interaction among different disciplines and institutes.

(ii) Blood Donation Camp

NSS TIET Patiala in collaboration with HDFC Bank conducted a Blood Donation Camp on April 20. Nearly 200+ units were donated and more than 200+ registrations were done too.

(iii) VIRSA

The Virsa Show, the cultural event brimmed with exhilaration and festivity was organized by TIET. Extravaganza performances like giddha, bhangra wars and traditional ramp walks were staged that day. This function was relished with glee and was celebrated to render the essence of the Punjabi culture.



(iv) Education Summit 2022

The News18 PHH Education Summit 2022, hosted by the Thapar Institute, was a great success. The event, hosted at J W Marriott, Chandigarh, was graced by various education thought leaders from Punjab, Haryana, and Himachal Pradesh. The summit was insightful, engaging, and had a high-quality exchange of ideas, highlighting the way ahead for education to contribute towards making India a \$5 trillion economy.

Watch Full Video On: <https://youtu.be/-CKfLLBxQ34>

(v) BIS meeting held at Thapar Institute



BIS working committee members holding discussions on IS12594 in CED Seminar Room

Dr Shweta Goyal hosted the BIS meeting. The objective of this meeting was to develop a new code for continuous galvanized steel rebars for application in concrete. The working group's purpose is to modify the existing IS 12594 in line with the latest international standard available on the subject. The CED of TIET successfully hosted the opening meeting of the committee.



Committee visit to Galvanized rebar plant at Mandi Gobindgarh

Thapar Institute Counseling Cell (TICC)

Thapar Institute of Engineering and Technology has always represented a gateway to a world of endless possibilities for its students. Being one of the premier institutions of education in the country, Thapar Institute of Engineering and Technology has always aimed at providing the students with an environment conducive to learning, exploration, experimenting, and excellence. And to ensure such an environment, one must first ensure the students' mental health and well-being.

Founded in 2016, Thapar Institute Counselling Cell (TICC) believes that Mental Health Services are not an accessory to a healthy lifestyle but constitute the foundation to a fulfilling life and has worked since then to ensure quality mental health services are accessible to all students of the campus.



TICC professional counselors work tirelessly to advocate and foster a stigma-free environment of mental well-being, desecrating the taboo regarding mental health problems. After an extensive evaluation, they also select zealous and enthusiastic students as Mental Health Student Ambassadors (MSAs). They bridge the gap between the students and themselves and work on raising awareness and carrying the torch of mental health literacy. Embodying the cell's values of integrity, respect, support, growth, and health, the MHSAs are passionate

TICC regularly conducts workshops, sessions, and seminars to dispel the misinformation regarding mental health while making the campus a safe space for its pupils to be their authentic selves without any predisposed prejudice. Over the past academic year, TICC has made numerous achievements and has conducted several successful events; some of them are:

- **Organized and conducted 'Let's Talk Session: Cognitive Distortions' on 22nd April 2022.** An offline session for the mental health student ambassadors. The session focused on: What cognitive distortions are and how to identify them.
- **Organized and conducted 'Let's Talk Session: Permission to feel' on 29th April 2022.** An offline session for the mental health student ambassadors. The session focused on: Importance of emotions and how to eliminate negative emotions through mindfulness.
- **Organized and conducted 'Open Let's Talk Session: Toxic Relationships' on 13th May 2022.** An offline session for the mental health student ambassadors and open for all. The session focused on: toxic relationships, signs to identify the toxicity, and how to move on.

Centre for Training and Development

Centre for Training & Development (CTD) organized SUMMER SCHOOL 2022, an exceptional learning & development program for students poised to sit for campus placement/internship interviews this year.



The program spanned five weeks and entailed comprehensive concept, application, and practice sessions on various employability-related areas. Experts with substantial industry/training experience engaged with students in day-long workshops and immersion exercises to impart meaningful insights concerning personal interviews, case/group discussions, guesstimates, and general aptitude. Interview sessions addressed challenges like designing a practical introduction, leading the panel, handling career-related questions, and establishing a link between personal goals & professional opportunities. Case/Group discussions equipped the students with techniques to collaborate, construct convincing arguments in groups, and analyze business cases using strategic approaches. Guesstimate exercises enabled the students to guess intelligently and leverage data effectively for decision-making. Aptitude sessions braced the students with methods to solve quantitative & verbal ability questions.

Special assistance was provided for career guidance & resume building. CTD also partnered with TICC to offer personal counseling sessions. The participants hailed the program as a valuable experiential learning platform.

Thapar School of Liberal Arts & Sciences

(i) Workshop I

A workshop was organized on “ Entrepreneurship as a driver of societal change in relation to sustainability” held on 6th April, 2022 by Dr Ingrid Wakkee from Amsterdam University of Applied Science.

Dr Ingrid Wakkee is the AUAS Professor of Entrepreneurship at the Amsterdam University of Applied Science. She is responsible for the AUAS entrepreneurship research program. At the same time, she also acts as scientific director of the AUAS Venture Centre (www.amsterdamuas.com/venture-centre) which focuses on stimulating and supporting innovative, sustainable and inclusive student entrepreneurship at AUAS. She is actively involved in multiple Centers of Expertise including the Centre for Economic Transformation and Centre for Urban Governance and Social Innovation.

In her research, she concentrates on entrepreneurship education, entrepreneurial failure and recovery, impact driven entrepreneurship, sustainable and collaborative business models and university industry interactions.



(ii) Workshop II

A workshop on “How to treat anxiety “was held on 21st April, 2022 by Dr Rachel De Jong from University of Leiden, The Netherlands. She interacted with the students and discussed the Anxiety issues and how to resolve them.

Dr Rachel de Jong works as an Assistant Professor at the Department of Clinical Neurodevelopmental Sciences at Leiden University in the Netherlands. She is involved in clinical education and supervising bachelor’s and master’s students. Besides this, she takes her research efforts across the border to conduct cross-cultural research and studies how to improve global youth mental health organised on 12th April 2022.

(iii) Workshop III

A workshop was organized on “Thought & Reality” on 31st April & 1st May, 2022. The workshop brought together researchers from Azim Premji, Ashoka, Jindal Global University, and Boğaziçi University working on metaphysics, epistemology, philosophy of science, and the philosophy of mind.

(iv) Visit of Prof Hans

Prof Hans Visited Thapar School of Liberal Arts and Sciences, Patiala to discuss the collaborations with University of Groningen in the Netherlands. He interacted with all the faculty members and with students

(v) International Collaboration

A MOU was signed between Temple University and Thapar Institute of Engineering & technology for exchange programs with Undergraduate students.

