# 11. International Engineering Program

# Credit-Transfer Program between Thapar Institute of Engineering & Technology and Trinity College Dublin (TCD)

In line with its mission to provide world class educational experience by incorporating global best practices in its format, Thapar Institute of Engineering & Technology has embarked on a Contemporisation Program under academic mentorship of Trinity College, Dublin, University of Dublin, Ireland. Under this program Thapar Institute of Engineering & Technology announces a credit transfer International Engineering program with Trinity College Dublin, University of Dublin (TCD). This program focuses on delivering a research inspired, outcome based educational experience to the students in partnership with TCD, an international university of repute.

The academic agreement between Thapar Institute of Engineering & Technology and Trinity College Dublin will give students admitted to undergraduate engineering programs at Thapar Institute of Engineering & Technology (TIET) the opportunity to study at Ireland's leading university, Trinity College Dublin. Eligible students will pursue the first two years of their course at Thapar Institute of Engineering & Technology before transferring to Ireland in years 3 and 4 of the degree program, subject to meeting the required academic requirements. On completion of the degree, qualified students can apply to pursue a Masters qualification at Trinity College Dublin by completing one additional year at Trinity.

This unique program is designed to give students international experience, prepare them for professional careers, and expose them to state of the art facilities and cutting edge research in the fields of engineering.

The program provides an opportunity for engineering undergraduates to secure a degree from Trinity College Dublin, consistently ranked in the top world universities.

Students who meet the academic entry requirements for the program will be able to apply for a Trinity-Thapar scholarship award which would reduce their Trinity tuition fee by 15%.

# About Trinity College Dublin, the University of Dublin

Trinity, founded in 1592, is Ireland's oldest and highest ranked university.

For over 425 years, this historic university has been a world leader in high-quality, internationally-recognised education. With a global reputation for excellence, Trinity promotes creativity and innovative thinking in students. Trinity's bustling campus is an oasis in the very heart of Dublin, a vibrant and safe European capital city. The university's city-centre location offers students a unique opportunity to blend a rigorous academic programme with an unparalleled array of cultural, social and professional experiences. A wealth of museums, theatres, galleries, cafes, restaurants and historic tourist sites are located right on Trinity's doorstep.

As a leading university on the world stage, Trinity is recognised for academic excellence and a transformative student experience.

Trinity academics are global leaders in their fields who work alongside students in a common enterprise of discovery. The Trinity curriculum is about imparting knowledge and is aimed at developing the critical faculties of the mind, through freedom of expression, willingness to engage in debate, and original research.

Dedicated academic and pastoral support is provided throughout a student's time in the university. Each incoming student is assigned a tutor, a member of staff who is there to advise and help them deal with any issues, academic or otherwise. In addition, students in the International Engineering Programme are also assigned a mentor in their engineering discipline.

95% of Trinity graduates are in employment or further study within 6 months after completing their studies.

The university has produced generations of outstanding graduates, held in high esteem by employers internationally. To study at Trinity is to become part of a global community of thinkers, creators, scientists, artists, inventors and entrepreneurs, from over 130 different countries.

Trinity is 1st in Europe for producing Entrepreneurs, generating 180 companies, producing 192 entrepreneurs and raising \$2,166 million over the last 10 years.

Pitchbook Universities Report, 2016/2017

# Pedagogy

The engineering programs offered at Thapar Institute of Engineering & Technology reflect the long held ethos that engineering education should be broad-based to enable graduates to develop throughout their professional careers, finding solutions for as yet unseen challenges. To further improve the educational experience of the students, Thapar Institute of Engineering & Technology has embarked upon a mission in partnership with Trinity College Dublin to deliver a research inspired, outcome based educational experience to the students at all levels. This is a major shift in focus from the current content-oriented imparting of engineering education to a project-based and outcome-oriented educational experience. The new teaching pedagogy lays emphasis on applying engineering skills through relevant engineering design projects, improving team-working skills and awareness of issues relating to ethics and professionalism. In order to achieve this objective, Thapar Institute of Engineering & Technology has partnered with Trinity College Dublin to implement a 'Contemporisation Program' to modernize and enrich the current education curriculum to a significantly higher paradigm. TIET will harmonize the curriculum of the undergraduate engineering programs to synchronize completely with Trinity.

TIET has adopted the learning outcomes approach for teaching with greater reliance on self-directed learning, mini-projects within the courses, research-led teaching, use of project work and assignments. All academic staff is encouraged to bring in cutting-edge research ideas from their own research into their teaching.

"Trinity-Thapar's one of a kind collaboration has been a boon for our cohort. The experience of studying in an international university is unparalleled. The transition, culturally and academically, was made plain sailing by the tremendous support from Trinity and Thapar."

Pulkit Madan Mechanical Engineering – 2016 transfer from Thapar



# Benefits of credit transfer program

Flexibility of choosing the engineering specialization:(Subject to equal distribution as far as possible across the most popular specialisms)

The student at the time of admission at Thapar Institute of Engineering & Technology may apply for any specialization on offer depending upon his/her rank in the qualifying examination. The student can pursue his/her interest area of study after undertaking a comprehensive set of engineering, science and mathematics courses including special engineering design projects during the first two years. With the knowledge gained during the first two years at TIET, the student is better equipped to undertake a specialization at Trinity.

There may be a possibility of selecting a different discipline at TCD for the year 3 and 4, however, this cannot be guaranteed and is entirely dependent upon availability within defined limitations on capacity and is subject to equal distribution as far as possible across the most popular specialisms. The specializations offered at Trinity are:

- 1. Civil, Structural and Environmental Engineering
- 2. Mechanical and Manufacturing Engineering
- 3. Electronic Engineering
- 4. Electronic/Computer Engineering (combined program)
- 5. Computer Engineering
- 6. Biomedical Engineering

These courses aim to broaden and deepen the student's knowledge and understanding of the chosen specialism. Subjects are studied in much greater detail and students undertake real-life, practical projects. A student who chooses Civil, Structural and Environmental Engineering could end up testing the pre-cast concrete used to build the London to Heathrow railway; a student who chooses Computer Engineering, might design a special purpose microprocessor.

The B.A.I./M.A.I. (Engineering) degree program is based on two years of general engineering, providing students with a firm grounding in the principles common to all disciplines, followed by two/three years of specialization. Graduates are professionally accredited engineers with both a broad-based understanding of the whole discipline and a detailed knowledge of their chosen specialist area. The aim is that graduates will be able to continuously train themselves, to adapt and move into related or newly emerging areas as their careers develop after graduation.

This programme is professionally accredited. Graduates have both a broad-based understanding of the whole discipline and a detailed knowledge of their chosen specialist area. The aim is that graduates will be able to continuously train themselves, to adapt and move into related or newly emerging areas as their careers develop after graduation.

The programme provides an opportunity for engineering undergraduates to secure a degree from Trinity, consistently ranked as Ireland's top university and within the top 1% of

universities worldwide.More information on the Trinity's UG Engineering degree: http://www.tcd.ie/Engineering/undergraduate/

"Trinity provides an unparalleled learning ground to kick-start your engineering career. I believe, the pleasantly challenging project work with befitting technology has prepared me to work on real-world applications in the industry."





# Opportunity to secure a Trinity College Dublin undergraduate engineering degree

Trinity College is consistently ranked amongst the top world universities. This unique collaboration gives Thapar students an opportunity to secure a globally recognized undergraduate engineering degree.

#### Cost Savings

The student will pay Thapar Institute of Engineering & Technology fee for the first two years of the program. For years 3 and 4, eligible students will pay the relevant Trinity fee for the course of study. By choosing this approach the student will pay substantially lower fees than their international counterparts who opt for a four-year program at Trinity. Additionally, boarding and lodging costs would be significantly lower as the student will be spending only two years in Ireland.

#### Postgraduate education and Placement

The students will have an opportunity to apply for a Master's degree at Trinity by completing a further year following the undergraduate program. A full list of available postgraduate programs is available here: https://www.tcd.ie/courses/postgraduate/

Students who study the full 5 year MAI course also have an internship option in their fourth year. This unique programme is designed to give students industrial experience, prepare them for professional careers, and expose them to state-of-the-art facilities and cutting-edge research in the fields of engineering. Additionally, all graduates are entitled to a 12-month work visa in Ireland providing students with the opportunity to gain international work experience.

#### Work along with study

Non-EU students registered on a full-time education course lasting for at least one academic year can work part-time, up to a maximum of 20 hours per week during term time and up to 40 hours per week during term breaks. On registration with the Garda National Immigration Bureau (GNIB), students will receive a passport stamp reflecting this entitlement. Further information can be found at www.icosirl.ie/eng/student\_information/working\_in\_ireland If the student takes up this route, he/she may be able to cover some of their living expenses in Ireland.

Also, the Careers Advisory Service at Trinity advertises many work experience and internship opportunities on their website. They also send out weekly emails with updated job listings for which students may apply. Students can also search for summer internship opportunities. Please see the Careers Advisory Service website for more details: http://www.tcd.ie/Careers/

"When I decided to move to Dublin, I knew it was an opportunity to step out of my comfort zone, challenge myself and be independent. The course exceeded my expectations, teaching me skills beyond computer engineering that have helped me develop as a person. This includes confidence, self-discipline and team working skills. By enrolling in Trinity, you get not only a supportive faculty and the state of art facilities, but also picturesque surroundings and company of some of the most wonderful people from around the globe. And of course, the Irish charm and friendliness, both inside the college and within the Georgian heart of Dublin serves as the perfect icing on the cake."



Peru Bhardwaj Computer Engineering – 2015 transfer from Thapar

#### Options after graduation

Graduates from Trinity College Dublin pursue careers across many fields all over the world. Students may sign up to meet with the International Careers Advisor for one-to-one careers advice or may enroll in one of regular workshops on developing interview skills, writing a CV (resume), finding work in Ireland or working overseas. You can find more information about what graduates from each course are doing now on Your Degree-What Next? http://www.tcd.ie/Careers/students/degree/

Trinity has an active alumni network, with over 95,000 alumni currently working in 122 countries. Local alumni chapters are always happy to welcome new graduates and can be a great source of networking for students.

#### Personal Tutor

Trinity's Tutor Service is a unique approach to student care. Every student is assigned a tutor, a Professor who provides personal and academic advice and support throughout their years in the University. A blend of mentor and advisor, tutors assist students with any difficulties, listen to their concerns and help them to get the most out of their time at Trinity College Dublin. www.tcd.ie/Senior Tutor

#### Life in Dublin

With a fast-growing, cosmopolitan population of just over one million, Dublin is a vibrant European capital city. Located at the heart of Dublin, Trinity sits at the very center of everything the city has to offer. Blending a high-energy, multinational professional culture with traditional Irish warmth and hospitality, Dublin has sprawling parks, cozy cafes and quirky restaurants for the daytime, with Victorian pubs, fashionable clubs, music gigs and theatre by night.

"Trinity really is one of the best universities in the world. I couldn't have asked for more; the teachers are so helpful to me, whenever there is anything I need or didn't understand they are always there without delay. The Trinity program granted me an international perspective I would not otherwise have got. I got to study different subjects from Thapar Institute of Engineering & Technology which expanded my knowledge in Computers and Electronics Engineering. Presently, I am in fourth year, but I already feel like I am prepared for the professional career ahead. The facilities are just amazing and the place feels homely. Trinity offers an intellectual environment that is matched in very few other places in the world. I have made really good friends here and many of them are among my best-friends now; I think it is because we are all united by work. The Trinity



experience is definitely one that I will never regret. It is quite possibly one of the best decisions of my life and I'm so grateful that I got the opportunity to study here. I would recommend Trinity College Dublin to anybody."

Shekhar Jain Electronics & Computer Engineering 2015 transfer from Thapar

#### Benefits of TIET-TCD Credit Transfer Degree Program

Flevihility

• may be a possibility of selecting a different discipline at TCD for the year 3 and 4, however, this cannot be guaranteed and is entirely dependent upon availability within defined limitations on capacity

Globally ecognized

- Secure a globally recognized UG Engineering degree
- Cost savings as compared to studying for the full four years at TCD in Dublin

Higher education and placement

- Can pursue Master's degree at TCD by spending one more year at TCD
- Will receive a globally recognised degree and apply for an overseas job

Work along with study

- Can work up to a maximum of 20 hours a week (40 hours during term breaks)
- Work experience and internships oppurtunities

Options afte

- Pursue careers across many fields all over the world
- Active alumni network with over 95000 alumni working in 122 countries

Teaching Paedagogy

- Project-led with greater reliance of experiential learning
- Research-inspired and outcome-based teaching

## **Number of Seats**

International Engineering Program	Number of seats
Civil Engineering	15
Computer Engineering	25
Electronics Engineering/Electronics & Computers	15
Mechanical Engineering	15
Total	70

Upto 70 students can take admission under this Program' with Trinity College Dublin (TCD), Ireland. These students shall study first 2 years at TIET and remaining 2 years at TCD. The degree shall be awarded by TCD, Ireland. These students will have to pay separate fee, as per the fee structure prescribed, from the first year of their study only. In case of any seat remaining vacant in the International Engineering Program, the same shall be filled in the respective discipline of UG (4-year program).

"Coming to Trinity has been a truly rewarding experience. The curriculum at Trinity is very unique, you get to learn a lot by doing assignments and labs under one of the best facilities in the world. It is after studying here that I have found my true passion for Computers. The Engineering course also focuses on developing the entrepreneur in you and gives you ample opportunities to kick-start your idea. Trinity being in Dublin-Europe's IT hub, you get a whole array of opportunities to grow. I feel lucky to have studied in one of the world's top universities."



Abhinav Garg Computer Engineering – 2015 transfer from Thapar

### **Admissions Process**

The admission to the undergraduate credit transfer program is purely on merit which is based on performance in the JEE (Main) examination. The eligibility conditions are same as for regular undergraduate engineering programs offered by Thapar Institute of Engineering & Technology. The students will be admitted in the undergraduate programs in the branch available as per their relative TIET rank at the time of exercising their choice at TIET. However, the students will also have a choice to choose a TCD branch, if available. (The TCD branch may be different from his/her regular TIET branch). Thus students opting for undergraduate credit transfer program shall be allocated two branches namely TCD branch and TIET branch. The students seeking admission under this category will undertake courses of their TIET branch for the first two years (majority of the courses are common during the first two years).

Such students will be transferred to TCD to pursue their further studies at the end of two years at TIET subject to meeting the academic requirements for the credit transfer program. However, if a student does not meet the academic requirements or opts out of TCD program for any unforeseen reason, he/she will pursue the courses of his/her TIET branch during Year 3 and 4 at TIET.

# Fees for the credit transfer program

	Campus	Annual Tuition Fee		Hostel expenses	
Year		Indian Students	Foreign, NRI Students	Indian Students	Foreign, NRI Students
Year 1 (2017)	Thapar Institute of Engineering & Technology	1.5 times the total normal fee*	As published on website www.thapar.edu	As published on website www.thapar.edu	As published on website www.thapar.edu
Year 2 (2018)	Thapar Institute of Engineering & Technology	1.5 times the total normal fee*	As published on website www.thapar.edu	As published on website www.thapar.edu	As published on website www.thapar.edu
Year 3 (2019)	Trinity College Dublin	€24,603	€24,603	€12,000 (accom & living expenses)	€12,000 (accom & living expenses)

Year	Trinity	<i>6</i> 05.005	€25,095	€12,300	€12,300
4	College	€25,095	€23,093	(accom & living	(accom & living
(2020)	Dublin			expenses)	expenses)

\* In case a student under this program is able to score a minimum CGPA of 8.50 (without any backlog) or more at the end of second year and opts for going to TCD, the additional 50% fee charged in first two years shall be reimbursed to him/her. Further, in case any student paying normal fee desires to join International Engineering Programme (IEP) at the end of 2<sup>nd</sup> year and is having CGPA of 8.50 or more, he/she is not required to pay the differential fee. The students having CGPA < 8.50 shall not be given any fee reimbursement.

Students who meet the academic entry requirements for transferring to Trinity College Dublin in the year 3 and 4, the students will be eligible for 15% discount on their tuition fee as a special Trinity-Thapar scholarship award which would reduce their Trinity tuition fee.

These students will be provided continuous mentoring support throughout their stay at TIET. Additionally, the performance of these students will also be reviewed periodically by TCD.

# Transfer to Dublin at the end of two years

The students will be able to pursue their education at TCD only if they obtain a minimum CGPA of 7.0 on a scale of 10 at the end of two years and have no backlog courses. If a student admitted in the undergraduate credit transfer program does not obtain the minimum CGPA, he/she will be required to repeat the courses where he/she obtained a grade lower than B-. Thapar Institute of Engineering & Technology will provide all the necessary mentoring and support to enable students to successfully complete the requirements for transfer to TCD. However, in case the student is unable to meet the minimum requirements, he/she will undertake the whole program at Thapar Institute of Engineering & Technology at an annual fee applicable at the end of 2nd year for the remaining two years.



