

# 11. International Engineering Program (4-years duration)

## **Credit-Transfer Program between Thapar Institute of Engineering & Technology University and Trinity College Dublin**

In line with its mission to provide world class educational experience by incorporating global best practices in its format, Thapar Institute of Engineering & Technology University 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 University through its Center for International Relations 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 University and Trinity College Dublin will give students admitted to undergraduate engineering programs at Thapar Institute of Engineering & Technology University (TIETU) 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 University 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 100 world universities by the QS World University Rankings. **Students who meet the academic entry requirements for the program will be able to apply for a Trinity-Thapar scholarship award (likely to be in the range of 15%) which would reduce their Trinity tuition fee.**

### **ABOUT TRINITY COLLEGE DUBLIN, THE UNIVERSITY OF DUBLIN (TCD)**

Trinity College Dublin (TCD) is ranked 1<sup>st</sup> in Ireland, and in 71<sup>st</sup> position in the top 100 world universities and 23<sup>rd</sup> position in the top European universities by the QS World University Rankings 2014-15. TCD is known globally for the excellence of its courses and research, the commitment of its staff, and the employability and quality of its graduates, as well as for the beauty of the historic campus. Since its foundation in 1592, Trinity has combined innovation with tradition and today TCD is home to the early 18<sup>th</sup> century Old Library and to the 21<sup>st</sup> century Science Gallery. TCD academics are global leaders in their fields, and they work alongside students in a common enterprise of discovery. The Trinity curriculum isn't just about imparting knowledge; it's aimed at developing the critical faculties of the mind, through freedom of expression, willingness to engage in debate, and original research. Solid 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.

Employers worldwide hold Trinity graduates in high esteem. The university has produced generations of outstanding graduates. Some of the most famous people in Irish history have been educated here: writers like Oscar Wilde and Samuel Beckett; scientists like William Rowan Hamilton and E.T.S. Walton, who won the Nobel Prize for splitting the atom, as well as two Irish presidents and many industry leaders and entrepreneurs.

## **I) PEDAGOGY**

The engineering programs offered at Thapar Institute of Engineering & Technology University 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 University 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 University has partnered with Trinity College Dublin to implement a 'Contemporisation Program' to modernize and enrich the current education curriculum to a significantly higher paradigm. TIETU will harmonize the curriculum of the undergraduate engineering programs to synchronize completely with Trinity.

TIETU will adopt 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. Most of the first two years of curriculum across of undergraduate programs will remain the same and the specialized courses will be taken up during the later years. All academic staff is encouraged to bring in cutting-edge research ideas from their own research into their teaching.

## **II) BENEFITS OF CREDIT TRANSFER PROGRAM WITH Trinity College Dublin**

### **i) 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 University 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 TIETU, 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.

More information on the Trinity's UG Engineering degree:

<http://www.tcd.ie/Engineering/undergraduate/>

## **ii) Opportunity to secure a Trinity College Dublin undergraduate engineering degree**

Trinity College is consistently **ranked amongst the top 100 world universities** by the QS World University Rankings. This unique collaboration gives Thapar students an opportunity to secure a globally recognized undergraduate engineering degree. Gain an insight into studying at Trinity by watching this inspiring student video: <https://www.youtube.com/watch?v=J8evbCLVepg>

## **iii) Cost Savings**

The student will pay fees at Thapar Institute of Engineering & Technology University 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. The savings would be in the region of €35,000 by this model. Additionally, boarding and lodging costs would be significantly lower as the student will be spending only two years in Ireland (approximately €20,000).

## **iv) 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/> Additionally, all graduates are entitled to a 12-month work visa in Ireland providing students with the opportunity to gain international work experience.

## **v) 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](http://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/>

## **vi) 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.

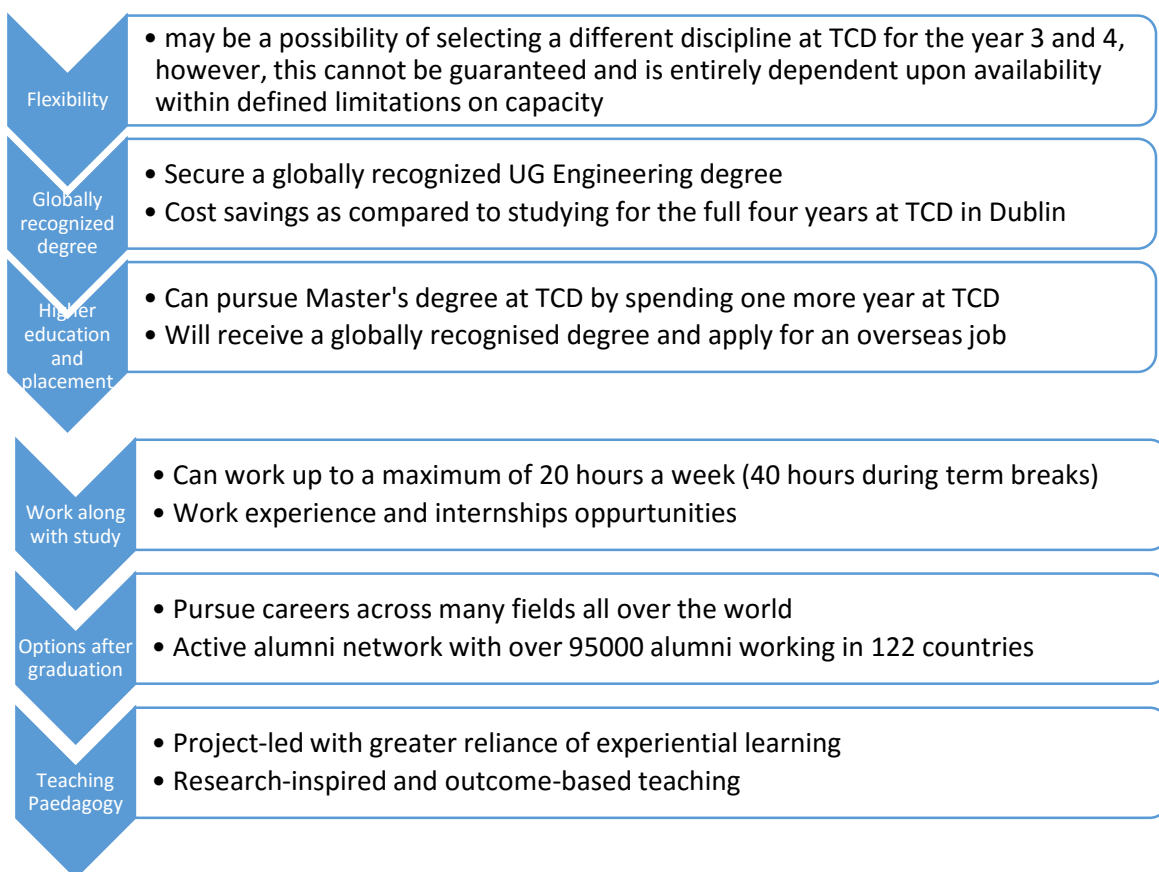
**vii) Personal Tutor**

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](http://www.tcd.ie/Senior_Tutor)

**viii) 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.

**Benefits of TIETU-TCD Credit Transfer Degree Program**



**Number of Seats:**

<b>International Engineering Program</b>	<b>Number of seats</b>
Civil Engineering	05
Computer Engineering	25
Electronics & Communication Engineering	15
Mechanical Engineering	15

<b>Total</b>	<b>60</b>
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**Maximum of 60 students can take admission under 'Contemporarisation Program' with Trinity College Dublin (TCD), Ireland.** These students shall study first 2 years at TIETU 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).

### III) ADMISSIONS PROCESS

The admission to the undergraduate credit transfer program is purely on merit which is based on performance in the JEE (Main) examination and securing at least 60% marks in the 10+2 examination or equivalent. The eligibility conditions are same as for regular undergraduate engineering programs offered by Thapar Institute of Engineering & Technology University. The students will be admitted in the undergraduate programs in the branch available as per their relative TIETU rank at the time of exercising their choice at TIETU. 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 TIETU branch). Thus students opting for undergraduate credit transfer program shall be allocated two branches namely **TCD branch** and **TIETU branch**. The students seeking admission under this category will undertake courses of their **TIETU 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 TIETU 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 TIETU branch during Year 3 and 4 at TIETU. (Also see Section V below).

### IV) FEES FOR THE CREDIT TRANSFER PROGRAM WITH TCD

Year	Campus	Annual Tuition Fee		Hostel expenses	
		Indian Students	Foreign, NRI Students	Indian Students	Foreign, NRI Students
Year 1 (2016)	Thapar Institute of Engineering & Technology University	1.5 times the total normal fee	As published on website <a href="http://www.thapar.edu">www.thapar.edu</a>	As published on website <a href="http://www.thapar.edu">www.thapar.edu</a>	As published on website <a href="http://www.thapar.edu">www.thapar.edu</a>
Year 2 (2017)	Thapar Institute of Engineering & Technology University	1.5 times the total normal fee	As published on website <a href="http://www.thapar.edu">www.thapar.edu</a>	As published on website <a href="http://www.thapar.edu">www.thapar.edu</a>	As published on website <a href="http://www.thapar.edu">www.thapar.edu</a>
Year 3 (2018)	Trinity College Dublin	€24,118	€24,118	€12,000 (accom& living expenses)	€12,000 (accom& living expenses)
Year 4 (2019)	Trinity College Dublin	€24,600	€24,600	€12,300 (accom& living expenses)	€12,300 (accom& living expenses)

Students who meet the academic entry requirements for transferring to Trinity College Dublin in the year 3 and 4, the students will be able to apply for a Trinity-Thapar scholarship award (likely to be in the range of 15%) which would reduce their Trinity tuition fee.

These students will be provided continuous mentoring support throughout their stay at TIETU. Additionally, TIETU will offer specialized reinforcement course(s) in English and soft skills to better equip them to adjust in Ireland. The performance of these students will also be reviewed periodically by TCD.

### V) TRANSFER TO TRINITY COLLEGE 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 University 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 University at an annual fee applicable at the end of 2nd year for the remaining two years.

