The Trinity-Thapar International Engineering Programme

A University for Ireland… a University for Thapar!

Specialisations offered:

- Civil, Structural and Environmental Engineering
- Mechanical and Manufacturing Engineering
- Electronic Engineering
- Electronic/Computer Engineering (combined programme)
- Computer Engineering
- Biomedical Engineering
### International Engineering Course Structure

#### Year 1 – Undertaken in Thapar

Modules common to all Engineering disciplines in Thapar and Trinity:

- Engineering Mathematics I and II
- Computer Engineering I
- Physics
- Chemistry
- Electrical Engineering
- Mechanics
- Introduction to Professional Engineering
- Engineering Design I: Graphics and Computer-Aided Engineering
- Engineering Design II: Project
- Experimental Methods

#### Year 2 – Undertaken in Thapar

Modules common to all Engineering disciplines in Trinity and Thapar:

- Engineering Mathematics III and IV
- Numerical Methods
- Computer Engineering II
- Solids and Structures
- Thermo-Fluids
- Electronics
- Engineering and the Environment
- Materials
- Engineering Design III: Project
- Engineering Design IV: Project

#### Year 3 – Undertaken in Trinity (Begin specialist lectures)

Year 3 modules (Common to all disciplines):

- Engineering Mathematics V
- Probability and Statistics
- Innovation and Entrepreneurship

Specialism modules in your discipline:

- Civil, Structural and Environmental Engineering
- Mechanical and Manufacturing Engineering
- Electronic Engineering
- Electronic/Computer Engineering (combined programme)
- Computer Engineering
- Biomedical Engineering

For details of all modules and timetables, please see [www.tcd.ie/Engineering/undergraduate/baiyear3/](http://www.tcd.ie/Engineering/undergraduate/baiyear3/)

#### Year 4 – Undertaken in Trinity

**B.A.I. Programme**

Year 4 modules (Common to all disciplines):

- 4E1 Management for Engineers
- 4E2 Individual Research Project

Specialism modules in your discipline:

For details of all modules and timetables, please see [www.tcd.ie/Engineering/undergraduate/baiyear4/](http://www.tcd.ie/Engineering/undergraduate/baiyear4/)

**M.A.I. Programme**

- Year at Trinity
- OR
- Semester 1 – Trinity
- Semester 2 – Internship

Graduate with Trinity B.A., B.A.I. degrees

#### Year 5 – Undertaken in Trinity

**M.A.I. Programme**

Year 5 modules (Common to all disciplines):

- 5E1 Individual Research Project
- 5E2 Research Methods

Specialism modules in your discipline.

For details of all modules and timetables, please see [www.tcd.ie/Engineering/undergraduate/maiyear5/](http://www.tcd.ie/Engineering/undergraduate/maiyear5/)

Graduate with Trinity B.A., M.A.I. degrees
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 47-acre 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
About Thapar University

Thapar University is today recognised among the leading privately managed engineering institutions of India and is the best of its kind in the north-western region of India. NAAC, an Autonomous Institution of UGC, has reaccredited Thapar University.

Thapar University has impressively grown in size and activities during the last six decades of its existence. Nearly 15,000 engineers have graduated so far, distinguishing themselves as proud Thaparians in diverse fields at home and abroad. As a fitting recognition of its pioneering role in promoting growth and development both at National and International levels, Thapar University was granted full autonomy and the status of a Deemed University in 1985 University Grants Commission (UGC).

About the International Engineering Programme (IEP)

Trinity offers a number of specialisations:
- Civil, Structural and Environmental Engineering
- Mechanical and Manufacturing Engineering
- Electronic Engineering
- Electronic/Computer Engineering (combined programme)
- Computer Engineering
- Biomedical Engineering

Trinity and Thapar University have developed a credit transfer International Engineering Programme (IEP) which enables students admitted to undergraduate engineering programmes at Thapar University (TU) the opportunity to study at Ireland’s leading university, Trinity College Dublin. Drawing on the expertise of the School of Engineering and the School of Computer Science and Statistics at Trinity, this programme focuses on delivering a research-inspired, outcome-based educational experience to students.

Engineering is a constantly evolving profession. As an engineer, you will need to be adaptable both to the rapid development of new ideas and technology and to the shifting requirements of industry and society. You will need to be a good communicator and be capable of working as part of a team. Above all, you must be a problem solver. You must be creative and able to synthesise and analyse information from different sources in order to arrive at efficient and practical solutions. The IEP equips students with all of the above skills and more.
Eligible students will pursue the first two years of their course in India before transferring to Ireland for years 3 and 4 of the degree programme, subject to achieving the required grades. Additionally, qualified students can apply to pursue a Masters qualification by completing one further year at Trinity.

The IEP undergraduate programme is multi-dimensional, having a strong technical focus and also an emphasis on developing other skills engineers require, such as team working skills, knowledge of ethics and an awareness of the social and environmental impacts of their work. Trinity graduates have a broad-based understanding of the whole discipline and a detailed knowledge of their chosen specialist area. They often end up working, both locally and internationally, on multi-disciplinary projects that require innovative approaches and thinking.

In the International Engineering Programme, the first two years are common for all Engineering students, followed by two Sophister years of specialisation to obtain the BAI degree, and optionally, a fifth year to obtain the MAI degree.

The first two years, which are taught in Thapar, consolidate the study of mathematical and physical sciences. Students are introduced to different facets of engineering through course and laboratory work and project design-based learning. The programme covers subjects basic to all engineering disciplines, including introductory courses in engineering science, mathematics, computer science, physics, chemistry, mechanics, electricity and magnetism, graphics and computer-aided engineering, and group design and build projects.

From third year onwards, students have the opportunity in Trinity to broaden and deepen their knowledge and understanding of their chosen specialism. Subjects are studied in much greater detail and students undertake real-life, practical projects. For example, if you choose Civil, Structural and Environmental engineering you could end up designing energy efficient buildings; if you choose Mechanical & Manufacturing engineering, you could end up designing autonomous, self-driving cars. If you choose computer engineering, you might find yourself building a company’s commercial and operational internet presence. More examples can be found on Trinity’s websites: www.tcd.ie/Engineering/ and www.scss.tcd.ie/.

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.

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.
“Innovation is at the heart of the Trinity learning experience”

The School of Engineering at Trinity offers outstanding teaching by engineers who are at the forefront of their field worldwide. It has a strong philosophy of research-led teaching and continuously benchmarks itself against the top international engineering schools. The Engineering course offers the opportunity to carry out research with the aim of producing graduates capable of participating at the highest national and international levels.

The Computer Engineering and Electronic/Computer Engineering specialisations are led by the School of Computer Science and Statistics. The School is noted for establishing Computer Science as an academic discipline in Ireland, with a rich history in the development of world-class research and teaching, as well as many successful start-up companies.

Students will gain industry-related skills and knowledge from studying all Engineering disciplines at Trinity. For those undertaking the Masters programme, there are opportunities for credit-bearing work placements. Current IEP students have successfully independently organised work placements during their summer holidays. The IEP offers excellent career prospects in Ireland and abroad.

“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 Bhard  
Computer Engineering – 2015-2017
“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.”

Tushti Singla
Computer and Electronic Engineering – 2015-2017

Why Choose Trinity?

Education at Trinity
- Trinity offers a world class educational experience, both in and beyond the classroom. Our curriculum is inspired by the research that takes place across the university. Our students are an integral part of our community of scholars who work together to explore the major questions in their areas of study. The IEP programme will enable you to cover a broad range of core subjects in your third and fourth years, allowing you to focus in-depth on the areas that interest you most.

Student Life at Trinity
- As Ireland’s top ranked university Trinity offers students an unparalleled experience. There are 120 societies and 48 sports clubs waiting for you to join them during Freshers’ Week, along with course specific social events for you to get to know your new classmates. In addition, Trinity students get to experience the legendary Trinity Ball, the largest private party in Europe.

International Reputation
- Trinity has a longstanding reputation for excellence in teaching and research. We are Ireland’s top ranked university.
- Trinity is Ireland’s most international university, ranked 40th in the world by the Times Higher Education ‘100 Most International Universities in the World 2016’.

Innovation & Entrepreneurship
- Innovation and entrepreneurship are at the heart of the Trinity learning experience
- Trinity students are actively encouraged to engage in entrepreneurship and innovation throughout their programme.

Student Satisfaction
In the Universum Student Survey 2014:
- When students were asked if they would choose the same Irish university again, Trinity scored highest of all universities.
Employability

- Trinity is the only Irish university to feature in the Times Higher Education Global Employability University Ranking top 150 in 2015.
- 95% of our graduates from 2015 are either in employment or further study.
- Over 500 employers publish vacancies annually with Trinity Careers Advisory Service.
- For Masters Students, Trinity offers situation-based learning with internship opportunities in global companies located in Ireland.
- Graduates are highly sought after, with an annual career event taking place, for both Engineering and Computer Science, where employers meet students to discuss employment opportunities. These include: Google, Microsoft, Accenture, SAP, Deloitte, Equifax, Fineos, First Derivatives, Geneva Trading, Hubspot, Lidl, Microsoft, Mucich Re, Murex, Susquehanna International Group Ltd, Swrve, United Health Group – Optum, Workday, Abbot Ireland, AECOM, Analog Devices, Arista Network, ARUP, Designer Group, Diageo Plc, Ericsson, ESB, Ethos Engineering, Glanbia, Glen Dimplex, Hilti, Intel Ireland, Jacobs Engineering, Jaguar Land Rover, Jones Engineering Group, Irish Cement Ltd, Kingspan Group Plc, Mott McDonald, OpenHydro Technology, RPS Group and Vodafone Ireland.
- Trinity’s Career Advisory Service offers guidance on CVs, job applications, LinkedIn profiles, along with the opportunity to undertake practice interviews.

Location

- Trinity is situated in the heart of Dublin city, at the centre of the Ireland’s transport hub, on a beautiful green campus which contains a wonderful mix of modern and historic facilities (including the country’s largest research library).

Diversity of the Trinity Community

- Trinity is home to a diverse and multicultural community. Trinity’s international students represent over 120 different nationalities.

Student Supports

- Trinity has a strong network of student supports to ensure all our students get the most out of their student experience. These include a personal tutor for each student, a wide range of learning supports to aid transition to Trinity, peer support and student mentors, and an excellent Careers Advisory Service to help find employment.

Alumni

- 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 Irish presidents Mary Robinson and Mary McAleese, and many industry leaders and entrepreneurs. Most recently, William Campbell, who was born in Derry and grew up in Co. Donegal, and who studied Zoology at Trinity, won the Nobel Prize for Medicine in 2015.
- Our Alumni Career Network provides support long after graduation – allowing graduates to connect directly with other alumni around the world, to benefit from their experience and receive career advice.
Benefits of Credit Transfer Programme with Trinity College Dublin

Cost Savings
The student will pay fees at Thapar University for the first two years of the programme. For years 3 and 4, eligible students will pay the relevant Trinity fee for the course. By choosing this approach the student will pay substantially lower fees than their international counterparts who opt for a four year programme at Trinity. Savings are in the region of €35,000 within this model. Additionally, living costs are significantly lower as the student will be spending only two years in Ireland (saving approximately €20,000).

Postgraduate Education and Placement
Graduates will have an opportunity to apply for a Masters (MAI) degree (incorporating a research dissertation) at Trinity by completing a further year following the undergraduate programme. MAI Students also have the possibility of undertaking a credit-bearing work placement. More details of the Engineering MAI year can be found here: www.tcd.ie/Engineering/undergraduate/maiyear5/

Graduates are entitled to a 12 month work visa in Ireland, providing students with the opportunity to gain international work experience.

Work While Studying
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 Irish Nationalisation Immigration Service (INIS), 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.

The Careers Advisory Service at Trinity advertises a variety of 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: www.tcd.ie/Careers/

“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 University 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
4th Year (Computer and Electronics Engineering)
Personal Tutor

Trinity’s Tutor Service is a unique approach to student care. Every student is assigned an academic tutor who provides personal and academic advice and support throughout their time in Trinity. 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. For further information see: [www.tcd.ie/Senior_Tutor](http://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 centre 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 by day, with victorian pubs, fashionable clubs, music gigs and theatre by night. Dublin has been voted as one of the safest cities in the world for tourists (Post Office Insurance 2015). Please see our Lonely Planet Guide for more information about Dublin: [www.lonelyplanet.com/trinity-college-dublin/](http://www.lonelyplanet.com/trinity-college-dublin/)

Graduate Skills and Career Opportunities

Engineering graduates from the Trinity College Dublin and Thapar University International Engineering programme have the capacity to think independently and work in teams. Their strong engineering foundation knowledge allows them to problem-solve in a wide range of technical areas. They are able to communicate their technical and creative ideas to other professionals and to society at large. They are able to take responsibility, deal with complexity and ambiguity, and successfully face open-ended challenges. Graduates from Trinity pursue careers across many fields all over the world.

Students can sign up to meet with the Engineering Careers Advisor for one-to-one careers advice. They also have the opportunity to undertake mock interviews, or attend a drop-in clinic to help perfect their CV (résumé) and LinkedIn profile.

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/) at: [www.tcd.ie/Careers/students/degree/](http://www.tcd.ie/Careers/students/degree/). Trinity has an active alumni network, with over 110,000 alumni currently working in 130 countries. Local alumni chapters are a great source of networking for students.

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

“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
4th Year Computer Engineering
**Admissions Process**

The admission to the undergraduate Credit Transfer programme 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 the same as for regular undergraduate engineering programme offered by Thapar University. The students will begin the first 2 years at Thapar University before transferring to Trinity for years 3 and 4 of the degree programme, subject to meeting the required academic requirements. Additionally, qualified students can apply to pursue a Masters qualification (MAI) by completing one further year at Trinity.

**Current fees for the Credit Transfer Programme with Trinity College Dublin**

<table>
<thead>
<tr>
<th>Year</th>
<th>Campus</th>
<th>Indian Students</th>
<th>Foreign/NRI Students</th>
<th>Annual Hostel Fees</th>
<th>Annual Hostel Fees</th>
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</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>Thapar University</td>
<td>INR 4,16,700</td>
<td>US $4500/6000/8000</td>
<td>INR 50,000 to 70,000 (max.) Accommodation</td>
<td>US $ 1250 (Shared Accommodation)</td>
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<tr>
<td>Year 2</td>
<td>Thapar University</td>
<td>INR 4,56,300</td>
<td>US $4500/6000/8000</td>
<td>INR 50,000 to 70,000 (max.) Accommodation</td>
<td>US $ 1250 (Shared Accommodation)</td>
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<td>Year 3</td>
<td>Trinity College Dublin</td>
<td>€20,502</td>
<td>€20,502</td>
<td>€12,000 (accom &amp; living expense)</td>
<td>€12,000 (accom &amp; living expenses)</td>
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<td>Year 4</td>
<td>Trinity College Dublin</td>
<td>€20,912</td>
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<td>Year 5</td>
<td>Trinity College Dublin</td>
<td>€14,578</td>
<td>€14,578</td>
<td>€12,000 (accom &amp; living expense)</td>
<td>€12,000 (accom &amp; living expenses)</td>
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Phone: +91 82 8800 8126 / 91 82 8800 8187
Email: int-programs@thapar.edu

For more information on Trinity and the Engineering Course, please see Trinity’s websites:
www.tcd.ie/Engineering/ and www.scss.tcd.ie/