



Technion International School of Engineering

Study Engineering in English

- Bachelor of Science
- Freshman Year of Engineering
- Study Abroad
- Master of Engineering



Technion
Israel Institute of Technology
International School of Engineering

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About The Technion

“The Technion is of prime importance
to the development of industries...”

Albert Einstein

Dear Prospective Student,

If you are a curious, highly motivated student and are interested in studying engineering in an international atmosphere, the Technion International School of Engineering (ISE) is an ideal option for you. By studying at the International School, you will profit from the Technion's high-level academics, excellent facilities and top-notch faculty.

ISE addresses the steadily growing global demand for engineers. Many fields of engineering, specifically civil, transportation and water engineering, are expanding, providing excellent job opportunities for trained professionals. As a Technion graduate, you will easily find your place in this wide open – and profitable – arena.

Set in the vibrant and colorful environment that is Israel, ISE makes it a top priority to acquaint you with this unique country, which is as rich in history as it is in scientific advances. Through field trips, lectures and programs, you will immerse yourself in Israel's past and present, and become closely connected to this dynamic nation.

If you are seeking first-rate academics, the path to a challenging and fruitful future and an experience that will widen your horizons in countless ways, you have found your venue. The Technion International School of Engineering is waiting to hear from you.



Prof. Arnon Bentur

Dean

Faculty of Civil and Environmental Engineering
Technion - Israel Institute of Technology



Prof. Amnon Katz

Academic Head

Technion International School of Engineering
Technion - Israel Institute of Technology



In 1924, the Technion - Israel Institute of Technology, Israel's first university, opened its doors and began the historic task of preparing young men and women to build a new nation. Today, the Technion is Israel's primary scientific-technological university and the largest center of applied research. The Institute's 13,000 students can choose from 18 faculties, and from undergraduate and graduate programs in engineering, science, architecture, medicine and management.

Ranked among the top technological institutes in the world, the Technion has a distinguished faculty of 550 that includes two Nobel Prize-winning scientists. These faculty members collaborate with leading scientists on research projects worldwide. The campus houses 40 research institutes and centers and nine interdisciplinary centers of excellence. Visiting academics and overseas graduate students provide an international atmosphere.

Paving the way from the laboratory to the marketplace, the Technion, through its R&D Foundation, has nurtured dozens of start-up companies. The Institute is also a major partner in various industry-university efforts.

Throughout its almost nine decades of existence, the Technion has stayed true to its mandate. It has remained committed to building – in every sense of the word. The Institute helps engineer not only structures, machines and materials, but also a better and brighter future for Israel and the world at large.

Several Technion landmarks from the last decade:

- Professors Avram Hershko and Aaron Ciechanover of the Faculty of Medicine received the 2004 Nobel Prize in Chemistry for their discovery of the crucial role of Ubiquitin in the process of protein breakdown in cells.
- Professor Emeritus Dan Zaslavsky developed an alternative low-cost method for electricity production and water desalination based on cooling hot desert air in a 1,000-meter high, 500-meter diameter tower.
- The Technion became one of only five universities in the world with a student program to design, build, and launch satellites
- Professors Moussa Youdim and John Finberg from the Faculty of Medicine, together with Teva Pharmaceuticals, have developed Rasagiline, a new anti-Parkinson's disease drug.

1. Albert Einstein, President of the first Technion Society / 2. Technion campus today / 3. Shai Agassi, Technion graduate named to TIME magazine's "100 Most Influential People" list in 2009 / 4. Nobel Prize Winners Technion Profs. Avram Hershko and Aaron Ciechanover

Undergraduate Programs

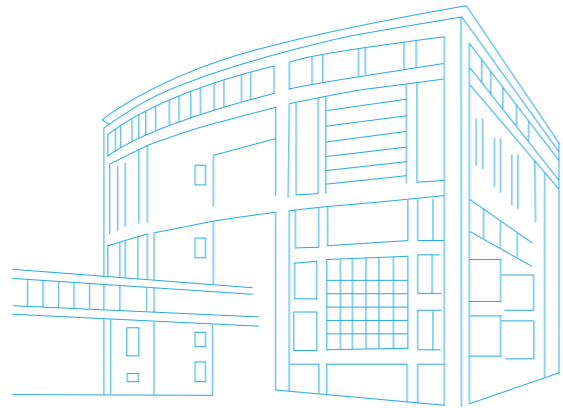
ISE offers three Bachelor of Science (BSc) programs in English:

- **Civil Engineering**
- **Water Resources and Environmental Engineering**
- **Transportation Engineering**

These BSc degree programs can be completed within four years. As part of these programs, most students participate in a pre-university period focused on mathematics and physics, which prepares them for their challenging studies ahead.

Taught completely in English, these programs grant students from around the world access to a distinguished faculty, prominent researchers and industry leaders.

ISE aims to train the top engineers of tomorrow by giving these young professionals the tools to develop – and implement – pioneering technologies worldwide.

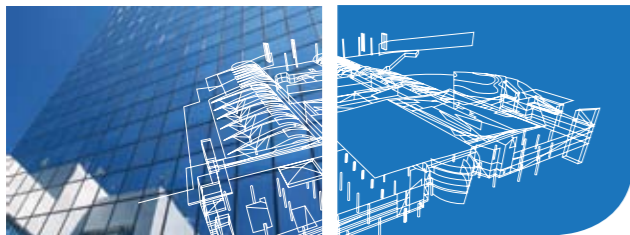


Civil Engineering



Today, more than ever, society relies on civil engineers to build the complex environment that surrounds us. From narrow canals to huge infrastructure schemes, multi-national projects are led by civil engineers globally. Investment in such projects rises, as growing populations and urbanization demand sophisticated interdisciplinary engineering solutions. Know-how in fields like computation, materials mechanics, monitoring and GPS is crucial in meeting the challenges of the 21st century.

This track deals with the planning, construction and maintenance of the physical environment, and includes projects involving bridges, roads, canals, dams and buildings.



Water Resources & Environmental Engineering



Water equals life. Entering the new millennium, more than a third of our planet has no access to water resources. Fresh new ways of thinking are needed to supply the liquid of life to growing populations, without damaging scarce, existing water resources and the environment at-large.

This track addresses some of today's most crucial problems and applies science and engineering skills to improve the quality and efficiency of natural resources. Environmental Engineering studies involve pollution control, recycling, waste disposal and public health issues, as well as the knowledge of environmental engineering law and the environmental impact of proposed construction projects.

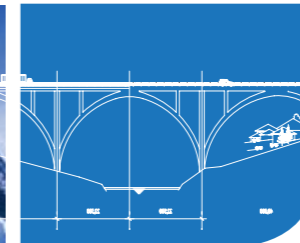


Transportation Engineering



Transportation offers fascinating challenges. In dense urban areas, congestion and the number of vehicles are constantly growing – along with the resulting pollution. This demands immediate, practical and advanced solutions. However, in remote impoverished regions, transportation is needed to deliver the most basic needs of food, medicine and communications.

Transportation engineers are desperately needed to address these and other related issues. This track treats the safe and efficient movement of people and goods. It focuses on all aspects of urban planning vis-à-vis road and rail travel, as well as the necessary provisions for pedestrians and alternative modes of transport.



Master of Engineering Programs

ISE offers Master of Engineering (ME) and MSc degrees in Water and Environmental Engineering. International students study within the Technion's prestigious Faculty of Civil and Environmental Engineering.

The ME program, taught completely in English, can be completed within 10 months (two semesters). The MSc program includes thesis research and can be completed within two years.

Those who hold a BSc in civil, chemical or mechanical engineering or in other engineering disciplines are invited to apply for admission.

Freshman Year of Engineering

The Freshman Year of Engineering is the ideal solution for students interested in engineering and science, who wish to spend meaningful time in Israel. Students can now study at the Technion for one year in English.

The freshman year program offers a rich variety of first-year level science and engineering courses: Algebra, Introduction to Engineering Mechanics, Differential and Integral Calculus I+II, Technical English, Physics I+II, Strength of Materials and Differential Equations. These courses provide students the foundation for specialization in different types of engineering.

In addition, students can explore a variety of general courses like Hebrew, Middle Eastern History and Jewish Studies, which foster a deep connection to Israel.

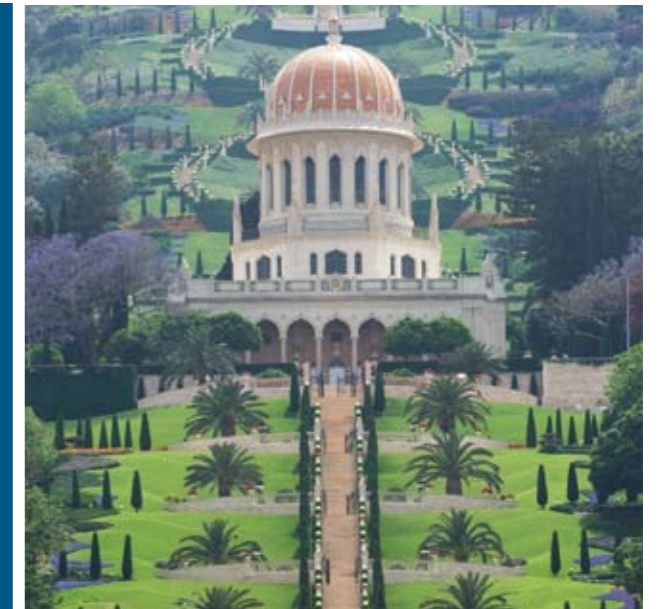
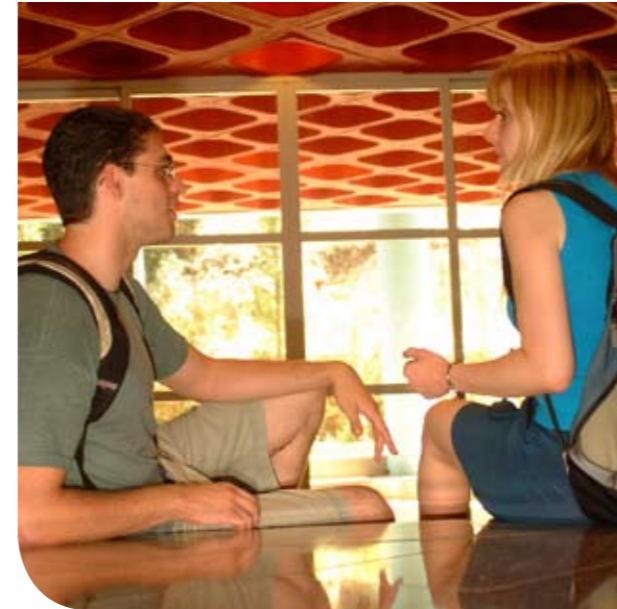
Extracurricular activities also play a central role in the freshman year experience. Students have the opportunity to travel throughout the country and participate in seminars and social events. Program participants live on campus, with Israeli students, and are fully integrated into life at the Technion.

For many students, successful completion of the Freshman Year of Engineering Program represents not an end, but a new beginning. At the closing of the year, students have the option to continue at the Technion International School of Engineering for a full undergraduate degree in English. They may also apply to transfer to another faculty at Technion to study in Hebrew, or to transfer credit to another university. Technion credit is likely to be recognized by all higher education authorities in the USA, as well as by partner universities like Brown University, Carnegie Mellon and Virginia Tech.



".... Technion has been a great way to integrate into Israeli society...."

Shushanna Kington, Perth, Australia



Study Engineering and Science Abroad

Studying in Israel, at ISE, offers numerous advantages. Whether you are an engineering, science or pre-med student, you reap the benefits of being at a renowned institution, which offers an extremely high academic level and world-class instruction. You may be studying for a semester, a year, a summer or working toward your undergraduate or graduate degree. The program you seek may be entirely academic or a combination of academic work with a research internship. Whatever your preference, you will receive the best education – both formal and informal.

At the same time, ISE intimately acquaints you with Israel. Planned field trips, activities and special events bring you closer to the country and its people. You will get "the lay of land", while receiving a background in Israel's geography, culture and language. Gain a basic grasp of history, ancient and recent, and witness, up close, how Israel leads in the high-tech arena, while being steeped in past tradition.

Student Life

Housing

On-Campus Dorms

Students at the Technion International School live on campus during all four years of study. Living on a scenic 300-acre campus is a great way to join the spirit of the Technion, where colleagues, classes and cultural activities are all at students' fingertips.

All students at the International School receive a private room in a five-person high-standard apartment, which they share with their Israeli peers. Apartments with kosher kitchens are available upon request.

Life at the Technion

Students at the Technion work – and play – hard. In and out of the classroom, life at the Technion is relentlessly stimulating. The Technion campus offers an array of sports, cultural and social activities, while the city of Haifa and its surrounding areas are rich in recreational offerings, history and beauty.

Sports

The Technion offers international students a broad spectrum of athletic activities. Facilities include an Olympic-sized indoor pool, three outdoor pools and a full-service gym, as well as tennis, basketball and squash courts. Students participate in close to 50 sports activities and Technion teams take part in collegiate competitions both in Israel and abroad.



Culture

Concerts by Technion musical groups and professional performances of classical and contemporary music are held throughout the academic year. The Technion has a symphony orchestra and choir composed of students and staff. To promote participation in these groups, academic credit and orchestra scholarships are available.

Dancers can join the Technion's Folk Dance Troupe, an acclaimed group that performs on campus and at national and international events. Those interested in acting can take part in the Technion's theater group, which appears on campus, and at festivals around the world. Cinema is a prominent part of the Technion scene, as recent and vintage films are screened regularly on campus.

Worship

Students of all faiths can find places of worship in Haifa, where different religious groups live in tolerance, side-by-side.

"What better way to spend my time than being challenged to think creatively, meeting new people, and exploring a new country?"

Naomi Stein, Boston, USA



Safe and Sound

For the Technion International School, the safety and well-being of the students is of supreme importance. The university's security network works 24 hours a day. Around the clock, security personnel guard all entrances to the university while others patrol the campus. During orientation, and throughout the year, students receive updated security information and instructions.

Throughout the year, the International School offers organized trips around Israel, which are accompanied by the appropriate security authorities.

Well-Being

All International School students have complete medical insurance coverage during their studies.

Students have access to an on-campus health clinic staffed by a general physician.

Counselors in the dorms and staff members are also available at all times to help students with any health care issues.

Student Day

Once a year, just before the summer arrives, the Technion lets loose with an all-day, all-night student celebration. On Student Day, the Technion rings with live music and shows, and the campus' grassy expanses fill with students strolling, dancing or just relaxing.

Outreach

Technion students are firm believers in giving back to the community. Numerous students take part in voluntary activities through the *Perach* community service program. In the Technological Manpower program, students bring science and technology to talented and motivated pupils from underprivileged areas. Other on-campus programs also serve as channels for sharing and altruism.

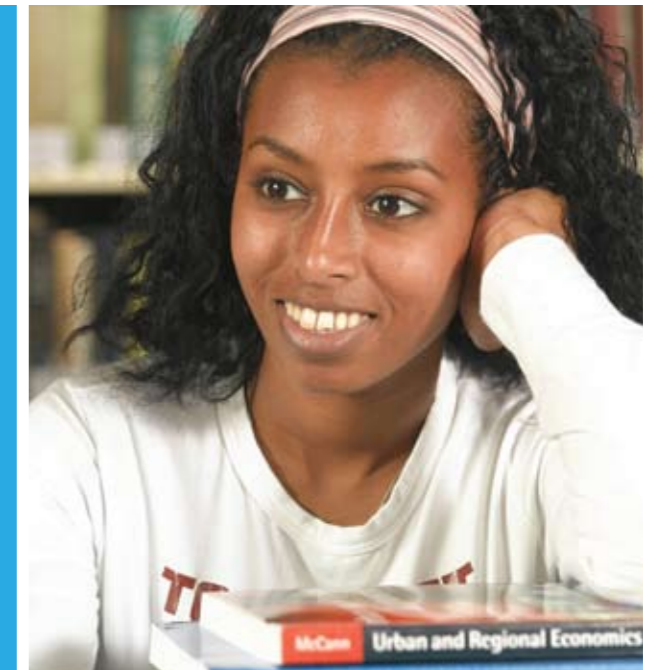
Green Campus

The Technion isn't just about abstraction, it's about action. Through the Green Campus Project, students find practical ways to protect the environment and its natural resources. As part of this effort, Technion students have helped build devices for saving and recycling water, taken part in waste recycling projects and designed eco-smart buildings.

At the Gutwirth Ecological Garden, students nurture plants that can develop with minimal irrigation and gardening care. Students also lead guided tours and workshops for the public.

Pure Fun

Students have a weekly ritual that lets them take time off from their busy academic schedules and relax. During the two-hour Wednesday Noon Happening, all undergraduate teaching ceases, while the Technion celebrates with live music and dancing, arts and crafts displays and a lively student market.



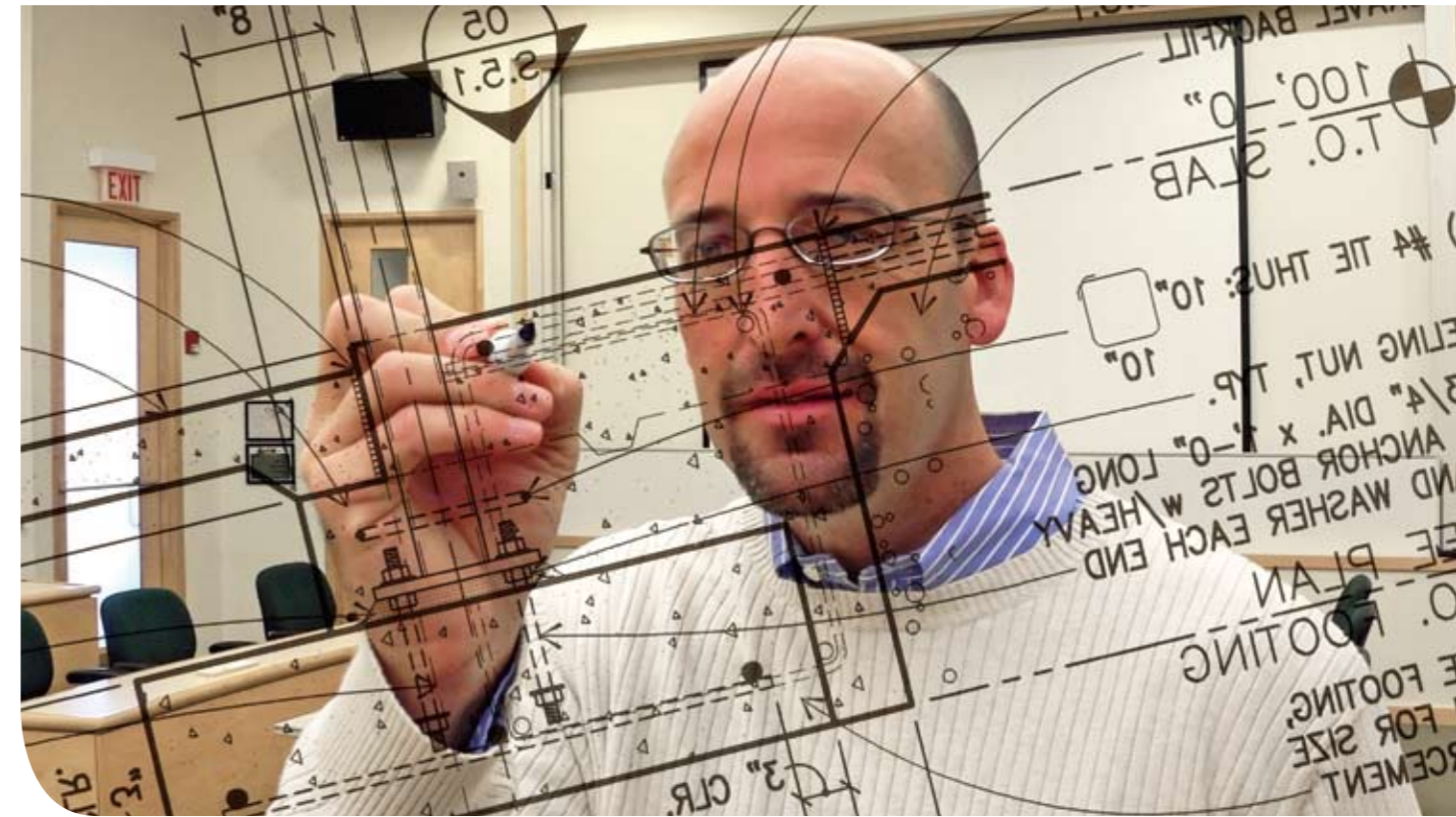
The Technion Advantage

Technion Engineers – a Commodity in Demand

Since the Technion's inception, it has been guided by a vision: to be a world-class institute of science and technology that serves local, regional and global needs. Technion leaders knew, then as now, that top notch training in science and technology yields immeasurable returns.

The Technion International School prepares its graduates to be well-positioned to enter the global engineering market by combining classroom academics with hands-on field experience. They find jobs in leading international companies or continue to advanced degrees in the world's leading institutions.

Along with enriching Israel and the world at large, Technion graduates themselves profit greatly from their education. Technion alumni have created the vast majority of Israel's high tech start-ups. Likewise, many major established firms – like Intel Israel and Teva Pharmaceuticals – are led by Technion graduates. In addition, former Technion students hold key positions throughout industry, finance, academia, government and medicine worldwide.



By combining academic work with hands-on experience, the International School lays the foundation for a fruitful future.

Field Experience

Students at the Technion have the unique opportunity to be exposed to and participate in ongoing international engineering projects in Israel. Time spent on site gives students a valuable window into the day-to-day realities of managing engineering projects.

Internship Opportunities

Some students want to roll up their sleeves and get to work even before they graduate. The Technion arranges internship opportunities for engineering students interested in working at national or multinational corporations in their field of interest.

Research Projects

Students at the Technion are encouraged to participate in on-campus research projects with graduate students and senior faculty members who have worldwide reputations in science and engineering. Cooperative research projects often lay the groundwork for professional opportunities after graduation.

Job Fairs

Students can interview for jobs and get hired while on campus. Every year, the Technion hosts a job fairs where multinational companies compete for the best engineering students entering the job market.



"We enjoy the active social life on campus."

Wang Zonggang, Beijing, China

Your Future

Laying the Foundation for Your Career

A degree from the Technion International School of Engineering allows you to enter one of the world's fastest-growing industries. Worldwide investment in infrastructure projects increases the demand for highly skilled engineers equipped with innovative and creative solutions. The Technion International School prepares you to be a major player in this lucrative area.

As a graduate of the Technion, you can make a difference in shaping our rapidly changing world. According to the United Nations, the world's population will expand by nearly two billion people in the next 20 years, bringing it to 8.3 billion by 2030. Sixty percent of those people, or almost five billion, will live in urban areas. This population

will need advanced infrastructure in the form of new roads, buildings, public transportation, clean water and renewable energy.

As an engineer, you will help improve the way people work and live. Your work can contribute to the sustainable development of countries, influence economic growth, and help preserve the environment.

A Technion degree gives you excellent prospects for finding a well-paid job. Worldwide, the average starting salary for engineers with a bachelor's degree is among the highest for college graduates. Israel, a world leader in science and technology, presents young engineers with tremendous work opportunities.

Israel: A World Leader in Science and Technology

Israel, despite its small size and limited resources, plays a leading role in the global science and technology arena. With the highest per capita number of scientists and engineers in the world, Israel ranks among the top five countries globally for patents per person. In addition, Israel far outnumbers its European counterparts in the number of companies traded on NASDAQ, and is home to the greatest concentration of high-tech start-up companies anywhere outside the Silicon Valley.

In Israel, nine of every 1,000 workers are engaged in research and development, nearly double the rate of the United States and Japan.

The country has proportionately the highest number of publications in science and engineering worldwide. It has a larger share of publications co-authored with foreign scientists than any other country.



The Application Process

To produce the highest-caliber engineers, the International School starts out with top quality "raw material": the best and the brightest students.

Realizing the importance of high grades and test scores, the International School also appreciates personal and social skills. It places great value on drive, enthusiasm and extra-curricular talents and activities.

To apply to the Technion International School of Engineering, students must provide the following documents:

- Application form
- High school transcripts with demonstrated excellence in mathematics, physics and science
- Two teacher recommendation letters
- A personal essay and English proficiency test, either TOFEL or IELTS (see table on page 19)

The admissions process will include a personal interview. Application forms are available on our website:

www.ise.technion.ac.il

Additional Information

- While the International School does not require SAT/ACT scores, it strongly recommends that students submit them.
- In some cases, the International School may require candidates to take a mathematics and/or physics test in their home countries.



"Technion is one of the leading institutes of technology in the world and has a great faculty, beautiful on-campus dormitories, and 24-hour computer rooms and libraries."

Snumon Mori, Tokyo, Japan



Transfer Students

The Technion International School welcomes transfer students from other universities. Transfer students are subject to the same application requirements as first-year students. To receive credit or exemptions for courses taken elsewhere, transfer students must submit a detailed syllabus in English for each course in question. Decisions will be made on a case-by-case basis.

Master's Students

To apply for a master's degree at the Technion, students must hold a bachelor's degree in the area to which they are applying. In addition, they must complete the application form available on the School's website: www.ise.technion.ac.il

Study Abroad Program

Students from abroad who wish to study at the Technion for a semester or a year should have an average of at least B+/80. We advise that candidates submit a letter of recommendation.

English Proficiency Tests

The academic program at the Technion International School is taught entirely in English. Applicants are required to demonstrate their English proficiency before they enroll. Applicants from high schools where English is not the primary language of instruction are required to submit official copies of their scores on the TOEFL (Test of English as a Foreign Language) or an equivalent test, such as the IELTS (International English Language Testing System) or the SAT Reasoning or ACT Plus Writing test.

Required scores on English proficiency tests

	Recommended	Minimum
TOEFL – Paper Based Test (PBT)	550	500
TOEFL – Computer Based Test (CBT)	213	173
TOEFL – Internet Based Test (IBT)	80	61
IELTS	6	5

Costs

Registration fee	\$50
Tuition	\$12,000 per year
Health insurance	\$650 per year
On-campus housing	\$3,000 per year

*Prices are subject to change due to fluctuations in market prices and currency exchange rates.

Additional Expenses

Please note that tuition fees do not cover applicants' airfare to and from Israel or the cost of textbooks. Students should also expect to spend \$500-\$600 each month on food, travel and other basic expenses (not including housing, detailed above). Additional expenses include Student Association costs and security charges.

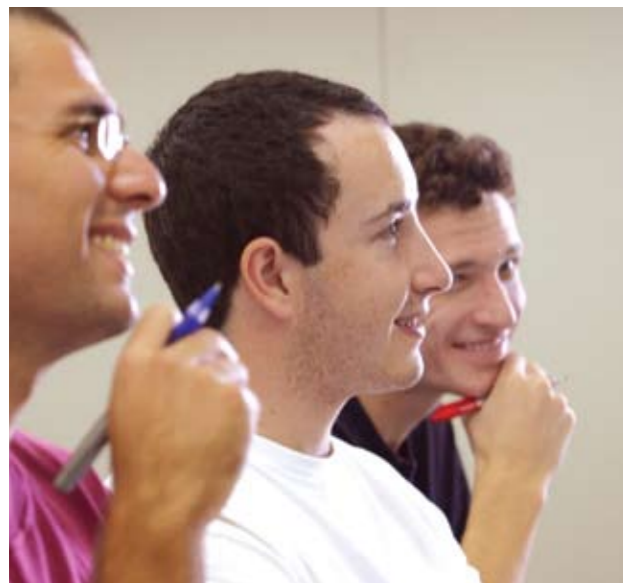
Preparation Period

The Technion International School of Engineering seeks to ensure that all students begin their studies on equal footing. To guarantee this, students must complete a 16-week preparation period.

During this period, students undergo intense training in mathematics, physics, basic Hebrew and learning skills to lay the foundation for the work ahead. Experience indicates that students who take part in an adequate preparation period have a greater chance of excelling, and completing their engineering studies.

The ISE makes every effort to help students pass the preparation period – and their subsequent degree program. While it provides individual tutors, extra classes and counseling, the ISE stresses that students ready themselves for a challenge.

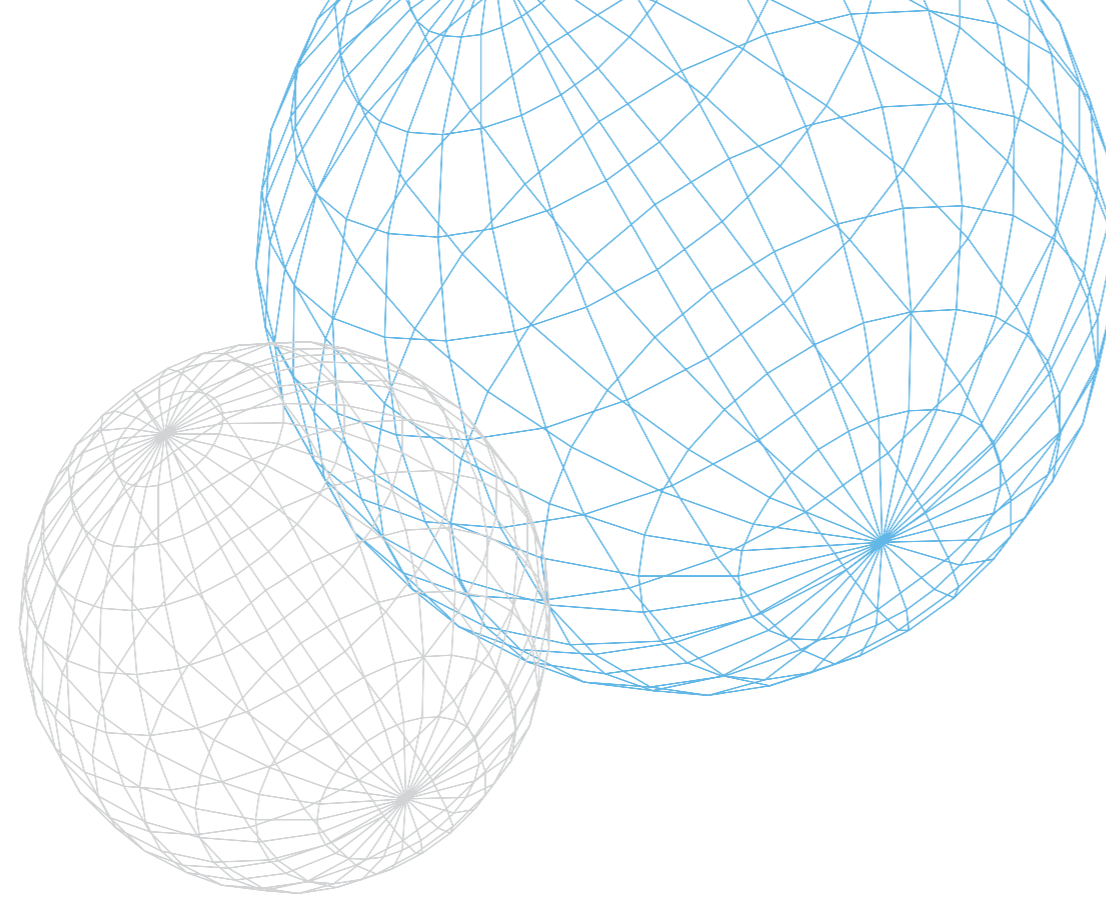
The preparation period will help ensure students' smooth integration in Israel. It allows them to get to know both Israel and their peers, and provides informative and fun activities.



Academic Calendar 2010/11

Date	Activity
December 15, 2009 (recommended)	Round 1 application deadline
February 15, 2010	Round 2 application deadline
June 1, 2010	Round 3 application deadline
July 25, 2010	Orientation week
August 1, 2010 - November 26, 2010	Preparation Period
November 28, 2010 - March 11, 2011	Winter semester
April 3, 2011 - July 25, 2011	Spring semester

Dates for the academic year of 2010/11 have not yet been finalized and may be subject to change.



"It is a privilege to be learning from some of the country's leading experts in the field...."

Hannah Bardin, Canada



Technion
Israel Institute of Technology
International School of Engineering

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