



AMERICAN
TECHNION
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Technion - Israel Institute of Technology: The Engine Driving Israel's High-Tech-Based Economy

"How lucky that the Technion was founded 24 years before 1948, thus laying the foundations for the future state of Israel. Had Israel been founded before Technion, the road would have been much harder." – the late Israeli President Shimon Peres

As early as 1924, the Technion created a committee to develop technical terminology in Hebrew, eventually publishing Israel's first multilingual dictionaries of science and technology and managing the nation's database for such Hebrew terms. Today, the Technion is fundamental to the growth of the "Startup Nation, shaping both the future of the State of Israel and a positive vision of Israeli leadership and values. Israel's stunning rise in the high-tech arena can be largely credited to the Technion - Israel Institute of Technology, supplier of the innovative scientists, engineers, entrepreneurs, and creative technologies.

The Technion has earned a global reputation for its pioneering work in nanotechnology, life sciences, stem-cell technology, water management, sustainable energy, information technology, biotechnology, materials engineering, and aerospace. It is emerging as a world leader in the critically important fields of cybersecurity, quantum science, and artificial intelligence. And after two major gas fields were discovered in the Mediterranean, it was the first university in Israel to start a program in energy engineering with specialization in natural gas and petroleum. The Technion is one of just 10 universities in the world that has built and launched a satellite, and is one of only a handful of similar institutes worldwide that include a medical school, encouraging rapid progress in biotechnology, drug development, and stem-cell technology.

Amazon opened an R&D center in Haifa in 2018, becoming the most recent multinational company to establish operations near the Technion campus. Other such companies include Apple, Intel, Google, Microsoft, IBM, Qualcomm, Yahoo!, Hewlett-Packard and others, providing these companies with the opportunity to take advantage of the Technion's research power and outstanding graduates.

In the 2019 Academic Ranking of World Universities (also known as the Shanghai Ranking), the Technion ranked among the world's top 100 universities for the eighth consecutive year, and took first place in Israel for the fourth consecutive year. In a November 2017 survey published by Times Higher Education, the Technion was named the world's leading academic institution in preparing students to take top positions in the digital revolution.

To focus interdisciplinary effort on research in priority subjects, and with funding from the American Technion Society, the Technion has established a growing network of research centers in such fields as nanotechnology, energy, water, life sciences, autonomous systems, aerospace, software, neuroscience, cancer, and most recently in cybersecurity, artificial intelligence and machine learning, and quantum science.

The Technion's 565 faculty members include renowned experts from universities around the world; in turn, its faculty members serve as visiting scientists in major universities and research centers worldwide.

Its student body of more than 9,000 undergraduates and more than 4,200 graduates is comprised of 40% women and 22.2% Israeli Arabs, which is slightly higher than the population at large. They study in the Technion's 18 faculties and 60 research centers and institutes. A growing number of foreign students are attracted to the Technion's reputation and its special international programs in civil engineering and medicine.

Founded in 1912, the Technion is Israel's oldest institution of higher learning. As such, it has been closely linked with the country's development, providing the education and expertise that built its infrastructure, created its military might, and turned the desert into orange groves. Today, it is Israel's primary source for the scientists, engineers, and applied research that drive its technology-based economy and secures its citizens against terrorism.

The university is steadily increasing its support for turning faculty research into commercial products. The Technion Research and Development Foundation (TRDF) manages university research programs and performs testing and research services for industry and government. T3, the technology transfer arm of TRDF, takes the Technion's groundbreaking scientific ideas and matches them with investors and entrepreneurs. T3 aims to foster commercial investment through the licensing of intellectual property and the establishment of startup companies. A stream of novel products and processes with export potential is constantly emerging from the Technion. On a research budget much smaller than elite U.S. universities, the Technion's annual income from technology licensing is just behind that of Duke University.

Technion DRIVE, an accelerator for entrepreneurs who are part of the Technion community, is bearing fruit after only 2 ½ years. For example, start-up NanoSynex, founded by two Technion alumni, raised \$1.5 million to fund further development of their product: rapid identification of antibiotic resistance. The technology is based on the research of Technion Professor Shulamit Levenberg.

The Technion's influence is known the world over, and a growing number of universities, municipalities, and businesses are eager to partner with it. One that speaks volumes about the Technion's reputation is its partnership with Cornell University to create Cornell Tech, an applied science educational institution in New York City expected to help create tens of thousands of jobs and businesses. At the very heart of this initiative is the Joan and Irwin Jacobs Technion-Cornell Institute (Jacobs Institute), which offers a dual master's degree from both universities, and the Runway Startup Postdoc Program. Cornell Tech's Roosevelt Island campus, home to the Jacobs Institute, was officially dedicated on September 13, 2017.

Another prime example of the Technion's burgeoning global influence is its joint venture with Shantou University to build a new applied sciences university in China called the Guangdong Technion Israel Institute of Technology (Guangdong Technion). This partnership is viewed by many as part of the broader movement of globalization now sweeping the academic world. Courses have already begun, and the Guangdong Technion campus officially opened in December 2017.

As Israel's center for high-technology education and research, the Technion is central to the nation's economic progress. As the premier institute of its kind in the region, Technion breakthroughs can benefit all the nations of the Middle East. And as a world-class research university, the Technion helps advance the frontiers of science and technology to benefit people around the world.

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