

**The Breaking  
New Ground  
Appeal**



*Leading the charge of  
women into Israeli high tech*

# Revolutionary



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Historically, Haredi men have entered the Israeli workforce in relatively low numbers, and women—particularly religious women—have lagged in their participation in high-tech professions. But the Jerusalem College of Technology is changing the game on these fronts, helping to create a more inclusive, balanced, and harmonious Israeli society.

Israel's high-tech sector is expanding so rapidly that there is a perpetual shortage of engineers. That shortage also means that these jobs are well-paid. By providing new, highly educated entrants into that workforce, we are helping drive Israel's economic engine.

JCT provides all of its students with a learning environment that simultaneously accommodates their religious lifestyle and focuses on subjects that lead to professional career development. JCT's placement statistics are currently at 93%.

With women, and particularly religious women, this bucking of stereotypes is even more stark. JCT's computer science department is among the largest in Israel and 53% of its students are women. 19% of the women studying computer science in all of Israel are students at JCT.

By helping religious men and women defy stereotypes, JCT is writing a new story for Israeli society. With the proposed Tal Campus, that story gets an exciting new chapter.



**Israel's future  
is being created  
in Jerusalem.**



Over its nearly 50 years of operation, JCT (aka Machon Lev) has contributed to Israel, both by producing high quality engineering and management professionals and by enhancing employment opportunities. JCT graduates have established over 100 high-tech companies, including some of Jerusalem's most successful start-ups.

JCT students and alumni have played a prominent role in serving their country either through the IDF or National Service. JCT alumni and faculty have spearheaded projects critically important to Israel's national security, receiving prestigious awards for excellence from the IDF Chief of Staff and the Ministry of Defense. R&D at JCT has led to major advances in fields ranging from cyber security to medical technology and driving safety.

JCT is committed to Israel's continued growth and expansion, by providing solutions to Israel's academic, economic and social needs.

### **Helping to meet Israel's engineer shortage**

- Producing 300+ engineers annually
- Nearly 40% of engineering students at JCT are women
- 42% of engineering students are Haredi
- 40% of JCT's Ethiopian students are studying engineering

### **Strengthening Israel**

- JCT graduates are involved in defense projects including the destruction of tunnels, Iron Dome, David's Sling, night vision goggles, Ofek satellite system, and tank protection systems
- 10% of IDF's 8200 cyber course graduates studied at JCT
- JCT graduates have founded over 100 high-tech companies

**Where the  
start-up nation  
starts up.**

# **Women at JCT:** **an extraordinary, transformational success story.**



In 2000, following the Israeli government call for increased involvement of women in high-tech, JCT established the Tal Campus in Jerusalem and the Lustig Campus for Haredi women in Ramat Gan. It was the first institution of higher education to offer a program enabling religious women to combine Judaic and academic studies in the fields of science and high-tech.

Today there are over 2,000 women on JCT's various campuses, including 1,300 from the Haredi (Ultra-Orthodox) community and an additional 50 women from the Ethiopian community. Graduates of JCT's women's programs are working in high-tech, security, defense and financial companies such as Cisco, Amdocs, Israel Aerospace Industries, Elta, Bank Mizrachi, KPMG, Intel and others.

This hasn't happened by accident. It has taken a thoughtful approach to religious sensitivities, as well as an awareness of the educational and cultural obstacles these students face. For example, as women from the Haredi, Hassidic and Ethiopian communities have often been academically disadvantaged, JCT offers pre-academic preparatory courses (mechina) for those who need it, as well as reinforcement courses and one-on-one tutoring throughout all years of study.

We do not compromise on the standards of our graduates: they only receive their qualification if they have earned it academically. Employers know this, and this is one reason for the 93% placement rate for our women.



**50%**

**of JCT students  
are women**



**2,000**

**Haredi women hold  
Bachelor's degrees  
from JCT**



**750**

**women are studying  
engineering**



**93%**

**of female students  
employed after  
completing their  
studies**

# Career options for religious women can be tiny. Natalie, for instance, is in nanotechnology.

Natalie Fardian-Melamed's nanotechnology research could mean that in the future, "your computers will be made out of DNA." How exactly would that be possible?

"The thickness of a strand of hair is actually a hundred microns, so if you divide that by a hundred thousand, you get to the nanometer scale," Natalie explains. "If we're looking at DNA, it's only two nanometers thin. We want to use DNA for computing – to take it out of its biological context, and use it as a building block to make nano electric circuits and nano memory storage units."

This would seem to be quite an unlikely career path for a mother of three, from a religious community in Safed in northern Israel. JCT sees it as its mission to make scientific and technological careers accessible to members of Israel's religious communities.

Part of that accessibility comes from offering a religiously-sensitive environment, where male and female students study separately, and where Torah study is built into the timetable. And it also comes from an understanding of the particular obstacles – educational, cultural and financial – that religious students, particularly women, face.

"JCT has allowed me to pursue my dreams," Natalie says.

"As a religious woman in a predominantly male STEM (Science, Technology, Engineering and Math) community, I feel like JCT gave me the tools to open up the way for other women as well, to pursue their careers and pursue their dreams."

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JCT changed my life. If it would not be for JCT, I would not be where I am today.

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Rachel Agama comes from the Ethiopian-Israeli community, in which half of the women work in cleaning or kitchen jobs. These include Rachel's mother, who brought up Rachel and her three siblings, as a single mother.

The low economic status of Israel's Ethiopian community stems in large part from a lack of education. JCT is at the frontline of breaking that cycle, with a specific program for Ethiopian immigrants, tailor-made for their needs (50% of participants are women).

As academic difficulties often form an obstacle for students, particularly those from the Haredi, Hassidic and Ethiopian communities, JCT offers a pre-academic preparatory course (mechina) for those who need it, as well as reinforcement courses and one-on-one tutoring throughout all years of study.

Rachel graduated from the nursing program at JCT's School of Life & Health Sciences.

# **Her mother works as a cleaner.**

## **Rachel has rather different career expectations.**

Established a decade ago, the Nursing Department was recently awarded the Ministry of Health's National Prize for Excellence. Our nursing graduates achieve the highest scores in Israel, and so receive choice job offers from leading hospitals.

Rachel is currently working as a nurse in internal medicine at Hadassah Hospital, as well as studying for a Master's degree in nursing.

Rachel says: "JCT changed my life. If it would not be for the opportunity I received to study at JCT I would not be where I am today."



Tikvah Katz works for Intel, as part of a team making sure that Intel's computer chips are not hackable. Quite important, given that these chips are in nearly every PC in the world.

If that doesn't strike you as a typical career for a Haredi woman in Israel to be doing, you'd be right. In fact, in Israel, the jobs in cyber are almost exclusively occupied by graduates from the Army's elite cyber units. How would a religious woman (who hasn't been in the Army) break into that club?

For Tikvah, it was through Cyber Elite, a JCT program that provides intensive cyber training to outstanding graduates of the college's degrees in software engineering and computer science, while placing them in cyber startups as well as in cyber departments of multinational, aerospace, and defense companies.

Tikvah's story is not atypical for JCT, a trailblazer in providing high-quality science and technology education to Israel's religious men and women, preparing them to enter the workforce and shattering the stereotype about their lagging contributions to Israeli society.

The challenges for Haredi women aren't just educational. Tikvah says: "I'm actually working right now in a group that's all men - I'm the only woman. And I was used to being in school with only girls. JCT gave me the tools and support to integrate into what was a very different environment for me, without compromising my religious standards."

**What do Haredi women in Israel do? This one works in cyber security.**



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# **The Breaking Appeal:** **help us double the** **New Ground opportunity.**

Tal Campus has grown by leaps and bounds. Today, there are over 2,000 women with 440 faculty members. Academic degree studies include software engineering, computer science, industrial engineering and management, bioinformatics, electro-optics, nursing, and accounting.

However, the Campus' physical facilities are sorely lacking. Presently situated in temporary rented quarters in Jerusalem's western industrial zone, the space is insufficient for the Campus' growth, and the rent has become exorbitant.

In July 2016, JCT received permission from the Israel Land Authority to develop the Tal Campus, on land adjacent to JCT's main Lev Campus.

JCT has launched a \$100 million capital campaign to fund the new Campus' 30,000 sq. m. construction. This will include academic buildings, laboratories, recreational facilities and a day-care center. With this new Campus, Tal projects a student population of 4,000 by 2030, more than double the current size.



The impact of JCT's programs for women is transformational: for the individual students, for their families and communities, and for Israel's society and economy. With your support, we can do twice as much.





Preliminary plans for the building of the new Tal Campus and creation of cutting-edge facilities include a 12-floor tower and 3-4 smaller buildings with 6 floors each which will house:

- Faculty of Engineering and Computer Science
- Faculty of Management and Business Administration
- Faculty of Health Sciences (in a designated building, including classrooms and simulation center, to accommodate the large number of students and expected growth rate)
- Designated building for the incredibly popular and fast-growing academic programs for Haredi women
- Classrooms, seminar and tutorial rooms
- Computer labs, telecommunications and project labs
- Academic library, with advanced multimedia systems and a print center for printing materials from the electronic databases
- Administrative offices
- Student center, including dining facilities
- Amphitheatre and conference center
- Parking and recreation areas
- Garden of Psalms

Here are a number of Gift Opportunities, which allow you to be recognized for your significant contribution to realizing this amazing project:

Gift Opportunity	Gift Cost
Campus Name (now taken)	\$15,000,000
Tower (stage 2)	\$12,000,000
Life and Health Faculty	\$5,000,000
Academic Buildings	\$5,000,000
Administration Building	\$5,000,000
Nursing Department	\$3,000,000
Departments	\$1,000,000
Library	\$1,000,000
Student Recreation Center	\$1,000,000
Midrasha	\$1,000,000
Floor	\$500,000
Center	\$500,000
Amphitheatre	\$500,000
Simulation Laboratory	\$500,000
Laboratories	\$300,000
Lecture Halls	\$300,000
Computer Labs	\$150,000
Seminar Rooms	\$100,000
Tehillim Window	\$50,000
Offices	\$25,000
Electro-optics Workstation	\$15,000
Computer Workstation	\$15,000

