



Holon Institute of Technology

**Quality & Excellence**

# STRATEGIC PLAN



A New Era in Higher Education

March 2015



## ABOUT THE INSTITUTE

The Holon Institute of Technology was founded in 1969 as a university-level institution dealing with instruction and research in Engineering, Science, Instructional Technologies, Technology Management, and Design. Until 2007, the Institute was considered one of the most dynamic institutions for higher education in Israel. The Institute succeeded in establishing and developing new learning programs, developing frameworks for instruction and research, hiring high-level new faculty members, and advancing current faculty members in internal committees and the Council for Higher Education's (CHE) appointment committee. The Institute's reputation soared, and along with it the number of students and their academic level. As a result, in 2007 the Institute won recognition and much esteem in the academic community and the business community, and was ranked **seventh** among 64 institutions of higher education in Israel.

Since 2007, there has been a decline in the level and character of the Institution, which has seen its singularity, direction and vision become blurred. As a result, the Institution's reputation has suffered. It would suffice to mention here just one aspect of this decline: the Institute did not present even a single new learning program as part of its five-year plan for the years 2010-2015, a fact that may be interpreted by the CHE as a sign of academic stagnation, and have a direct negative effect on the CHE's attitude towards the Institute.

The Institute is supported financially by the CHE and the Planning and Budget Committee (PBC), and accordingly is deeply committed to the state, the society and the economy.



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## FOREWORD

I'm pleased to present to you the Holon Institute of Technology's (HIT) strategic plan for the period of 2015-2025.

The State of Israel is recognized worldwide as a technology powerhouse, and in order to guarantee its continued existence and development, it is of the utmost importance for it to be a world leader also in science and engineering. Innovations in advanced technologies require on the one hand deep and extensive knowledge, but on the other hand also bold, creative thinking. Such technologies cut across different fields, serving vital functions in the business world and the economy, in fields such as security, health, infrastructure, agriculture, and more. Accordingly, the establishment of an experienced professional workforce, which could take part in the creation and development of advanced technologies for the Israeli business world and economy, is a vital national task.

The Holon Institute of Technology must take part in this national task, by training engineers, scientists, technology managers and designers to contribute to the economy and society at large. Alongside and in light of the fast changes taking place before our eyes in all walks of life, the Institute must present a strategic plan for the coming decade, tracing the new path the Institute will follow into a new era in higher education.

The Institute's strategic plan will lay out its vision, objectives, goals, critical factors for success, work plans and budgets. The strategic plan is not meant, naturally, to obviate the need for effective administration as part and parcel of daily activities, but rather to provide all those engaged in work at the Institute with a clearer sense of the Institute's objectives and goals, as well as the methods for regulating and controlling their implementation.

### **The strategic plan aims to lead the Institute:**

- To continue pursuing academic development and growth
- To periodically reexamine and redefine its vision and objectives
- To redefine its short- and long-term academic priorities

### **The plan will offer a strategic sketch which will include, among else, the following core subjects:**

- Developing academic programs that are attractive, up-to-date and relevant
- Securing an appropriate student mix for each faculty and degree
- Fostering the academic and administrative faculty
- Developing the physical infrastructure
- Improving relations with different types of business, as well as with academic and research institutions in Israel and abroad

The key to success in implementing the plan lies in making sure that all those participating in the plan are aware of its different aspects and understand the importance of their own contribution. This will allow us to accomplish the objectives delineated in the plan, and to contribute to its success.

I wish us all good luck in implementing the plan.

**Professor Eduard Yakubov**  
President of the Institute



## THE INSTITUTE'S VISION

To be an outstanding academic institution, scientific-technological and multi-disciplinary, unique among other institutions of higher education in Israel, combining outstanding and dynamic academic instruction alongside applied research and development, in continuous collaboration with and for the benefit of local businesses and Israeli society as a whole.

Realizing this vision will allow Institute graduates to find their place in the workplace, the economy and society, and will brand the city of Holon as an international level academic city.

### The Institute's Goals

The goal of the Institute is to prepare its engineers, computer scientists, applied mathematicians, designers, technology managers and instructional technologies experts to enter the business world and Israeli society as leaders and partners. At the same time, the Institute seeks to inculcate good civic values in its graduates and launch them on a path of excellence coupled with social responsibility.

The Institute must diligently strive to prepare its graduates to face rapidly changing technological challenges, and contribute to the development and advancement of business in general and advanced industries in particular. It must seek to supply its graduates with the most up-to-date tools for creative thinking, self-regulated learning, deep analysis and teamwork, so that they can create and participate in developing complex and sophisticated systems.

The Institute will make higher learning in the fields of science and technology more accessible to segments of the population that have traditionally had a harder time acquiring it, such as working people, soldiers during their mandatory conscription or afterwards, ultra-orthodox Jews and minorities (Druze, Circassians, and Arabs).

The Institute must develop and establish applied research infrastructures for the benefit of groundbreaking technological developments, closely collaborating along different channels with research and business institutions in Israel and abroad.

The Institute will constitute a significant academic base in the urban space which it occupies, will act to foster excellence among youth in the city of Holon and its vicinity, and will seek to be a significant factor in making academic studies, associate degree studies and training and enrichment courses accessible to the residents of Holon and its vicinity, as well as for the advanced technology industry in the vicinity.



## Crucial factors for success

The success and reputation of the Institute depend to a large extent on:

- Study programs that are high-quality, attractive, up-to-date and relevant for the economy's changing needs
- A high-level academic faculty
- A close and fruitful relationship with the business world and academia in Israel and abroad
- High achieving students
- Appropriate teaching and research infrastructures
- Public exposure, advancement and promotion of the Institute

## The present situation

The following majors are presently offered at the Institute:

- B.Sc. in Electrical and Electronics Engineering
- B.Des. in Industrial Design, Interior Design and Visual Communications Design
- B.Sc. in Technology Management
- B.Sc. in Computer Science
- B.Sc. in Applied Mathematics
- B.A. in Instructional Technologies
- M.Sc. (no dissertation) in Electrical and Electronics Engineering
- M.Des. (no dissertation) in Integrated Design
- M.Sc. (no dissertation) in Technology Management

## Numbers of students and faculty members/administrative staff:

As of today, around 3,500 students are enrolled in the Institute's undergraduate, graduate, and pre-academic preparatory programs. The Institute has trained more than 10,000 graduates, many of whom hold key positions in the business world. About 100 faculty members and 144 administrators work at the Institute, in addition to adjunct teachers, some of whom are also influential industry figures.



## Challenges and threats facing the Institute:

- The rapidly accelerating advance of knowledge and technology is a central characteristic of modernity, as is multi-disciplinarity and the creation of new knowledge disciplines. The contemporary business world is extremely dynamic, and often dictates to academia the subjects and specializations it expects graduates to possess. Israeli studies show that in any given year, there is a shortage of about 600 electric engineers and about 600 software programmers. In order to respond to the dynamic demands of the business world and the economy, the Institute must refresh its learning programs as often as possible, including core courses, and equip its graduates with up-to-date expertise and technology. The ever-increasing requirements for the profile of a successful graduate require, among else, hiring new faculty members and building labs with new equipment – needs that call for substantial investments.
- The Institute operates in a tough, competitive environment, in which a large number of institutes for higher education offer similar study programs. Among them are universities – Tel-Aviv, Bar-Ilan, and Ariel, and colleges – Afeka, Tel-Aviv-Yafo, the academic track of the College of Management, Sami Shamoon, Azrieli (Jerusalem), the Lev Institute, Shenkar, and more.
- The modern age is also characterized by a process of globalization, among else of academia, as well as growing use of innovative methods and technologies. Studies show that the number of students engaged in e-learning at academic institutions around the world is growing at an accelerated rate.
- Over the next two or three years, a steep decline is expected among the secular segment of the potential higher education population in Israel. This decline might lead to a decline in the number of potential students at the Institute, and represents a substantial risk both in academic and budgetary terms. For example, 100 fewer students in one academic year would lead to a reduction of 3.5 million shekels in the Institute's budget per year, so that over the course of the three to four study years of the average student at the Institute, the budget could lose some 12 million shekels.

At the same time, there has lately appeared an evident and growing demand among populations who have less access to higher education (such as working people, soldiers during their mandatory service and afterwards, ultra-orthodox Jews, and ethnic minorities) for higher education under more flexible conditions, adapted for their special needs.



# SWOT

## Weaknesses

- Positioning the Institute – as an alternative to universities
- The Institute is not perceived in the public at large as unique or different from other colleges
- Deficiencies which were discovered in the State Comptroller's report
- Damage to the Institute's reputation for the CHE/PBC as a result of the report
- Preference in the business world and the economy for university graduates over Institute graduates
- Faculty members perceived as old
- High number of senior faculty members near retirement
- A sense of resentment among faculty members due to very long processes of academic appointments
- A lack of student housing on the one hand, and the Institute's commitment to the 'housing project' on the other (which could seriously affect the Institute's budget)
- No sports and leisure facilities at the Institute
- Not enough teaching and research infrastructure
- A high level of uncertainty regarding numbers of new/potential students
- A dependence on the regulator's budget
- No 'campus life'
- A sense of inferiority in shaping public awareness, and the lack of a powerful brand
- Only one undergraduate program in the Faculties of Engineering and Technology Management

## Strengths

- Academic reputation: the faculties of Engineering, Sciences, and Design enjoy a good image, when compared to other institutions
- Academic prestige: encouraging and engaging in high-level academic research, winning research grants from competitive national and international funds, such as ISF, BSF, GIF, and others. The Institute is considered a leader in research among the non-university Israeli institutions
- University-level academic faculty in the faculties of Sciences, Engineering, and Technology Management
- Geographical location in the center of Israel, near industry epicenters
- Warm, personal care for students, and a supporting, family-like atmosphere
- A comfortable learning environment
- Unique study programs
- Having graduate programs
- Flexible schedules available for students who wish to combine their studies with work
- New and determined academic leadership that believes in flexible, dynamic and determined management in applying the strategic plan

## Threats

- A high number of academic-technological colleges, and greater competition between them
- An expected decline in potential secular students over the coming years
- Competitor colleges enjoy a stronger image
- Dependence on the Regulator's budget
- Uncertainty about the number of potential students who apply each year
- A problematic organizational structure, inappropriate for an academic institution, which threatens its existence and development
- The Institute's shortage of faculty members, and the harsh consequences this entails for its academic level and its financial support by the CHE and PBC
- A disproportion between the number of faculty members and administrators

## Opportunities

- Processes of academization and renewal at the Institute: promoting and developing excellence and leadership among students, faculty and administrative staff
- Multi-disciplinary academic programs for honors students combining Engineering, Sciences, Design, and Technology Management
- Special programs for unique populations of ultra-orthodox Jews, Druze, Circassians, Arabs and new immigrants
- Special programs for designated groups in various fields (the security forces and IDF in general, Army Intelligence, the Air Force, special units in the IDF, focus industries)
- Promoting women's rights, including hiring female students and faculty members in the fields of Engineering, Technology and Sciences, establishing an infrastructure for hiring high-achieving female students, including personal counseling and designated scholarships
- Plans for graduate programs with a dissertation
- Plans for applied PhD programs
- Encouraging collaboration with hi-tech companies and their involvement in academic development and project guidance
- Founding applied multi-disciplinary research centers in specialized subjects (M3IC, elderly care technologies, etc.)
- Strategic collaboration with the biotechnological and health companies (medical clinics and centers, private businesses) in the fields of research and development, while involving faculty members and honors students in MOP projects
- Improving and expanding ties and collaboration with the city of Holon

## FRAMEWORK FOR THE STRATEGIC PLAN FOR 2015-2025

Beyond defining the objectives and paths toward their attainment, the Institute will take action already in the near future in all relevant fields (academic, management, infrastructure and resources) in order to ensure its continued activity and functioning at an adequate academic standard, and its ability to keep facing considerable challenges. These actions should bring about greater efficiency in the Institute's academic and administrative activity, guarantee its economic stability, and establish it as a leading Institution in the Israeli higher education system.

The Institute's objectives delineated in the strategic plan:

1. Developing and maintaining study programs that are attractive, up-to-date and relevant
2. Hiring excellent new faculty members, while fostering and promoting the existing staff
3. Increasing the number of students, while emphasizing hiring those with a potential for academic excellence
4. Promoting women at the Institute
5. Improving relations with businesses and academia by founding advanced programs for applied research and instruction
6. Founding cutting edge centers for multi-disciplinary applied research, with the collaboration of academia, businesses, and other organizations
7. Developing physical infrastructure for expanding the Institute
8. Anchoring the Institute in its urban setting, while improving and expanding collaboration with municipal authorities
9. Improving the Institute's contribution to Israeli society in making higher education more accessible
10. Improving the Institute's brand name and reaching relevant target audiences
11. Converting the External Studies Program at the Institute to a leading associate degree school
12. Formulating an ethical code for the Institute regarding instruction, research, administration, and daily life
13. Fundraising for further development of the Institution's teaching, research, and infrastructure



# GOAL 1: DEVELOPING AND MAINTAINING STUDY PROGRAMS THAT ARE ATTRACTIVE, UP-TO-DATE AND RELEVANT

The Institute will seek to promote and inculcate academic and technological excellence among its students, equipping them with an adequate and comprehensive 'toolbox' – a comprehensive and substantial theoretical background, together with applied, up-to-date proficiency in new technologies, and development of original and critical thinking, the ability for self-regulated learning, and the values of social responsibility and technological leadership.

- The Institute will move to raise the value of the study program in the students' eyes, by making vertical and horizontal connections with other courses and study contents in the program, in order to assist students in structuring the acquired knowledge in a modular and multi-dimensional way, through creating an awareness and understanding of the rationale and importance of each course as a component in the general learning program.
- The Institute will diligently work on creating programs that are innovative, attractive and unique in new fields of study needed by businesses and the economy, and will seek to maintain in each Faculty at least two undergraduate programs. These programs will be constructed on a modular basis, thus allowing an optimal use of the faculty and instruction infrastructure.
- Each year, the Institute will update and refresh its study programs, and offer new courses and avenues of specialization on the technological front, which answer the needs of businesses and the economy. For this purpose, the Institute has already founded, in collaboration with the city of Holon, the 'Academia-Business' forum, in the context of which leading industry figures will appear in Faculty curriculum committees and other committees. They will work together with faculty members in the Institute to refresh and update materials in existing study programs, to develop new courses and avenues of specialization, and establish study programs in new fields of interest which are in demand today, and which will play a major role in the future in advanced technology.
- The Institute will encourage bringing in mentors and guides from businesses for students' final projects in different faculties.
- The Institute will run unique multi-disciplinary study programs for an additional undergraduate degree for high-achieving candidates and students. Such programs will allow students to combine different fields from Electrical and Electronics Engineering, Computer Engineering, Computer Science and Applied Math, thus expanding and fortifying the applied scientific and technological knowledge with which they will enter the world of business. These programs have already added to the Institute dozens of new high-achieving students, and clearly have the potential to be especially attractive for students with high admission portfolios.
- The Institute will launch study programs for Masters degrees with dissertation and applied PhD degrees for honors students in collaboration with universities, colleges, and hi-tech companies.
- The Institute will strive to develop courses in innovative instruction and instructional technologies, and in particular MOOCs (Massive Open Online Courses) in several languages.
- The Institute will expand its 'Metsuyanoar' program for high-achieving youth in Holon and the vicinity, and act to establish frameworks for honors high school students to be able to gain credits towards a degree in different faculties. These students would then be able to resume their studies at the Institute after their high school studies and/or mandatory military service.

## GOAL 2: HIRING EXCELLENT NEW FACULTY, WHILE FOSTERING AND PROMOTING THE CURRENT STAFF

The level and reputation of an institute for higher education is largely determined by the academic level and reputation of its faculty. In the past, the Institute used to hire outstanding faculty members, who contributed to the Institute's level and reputation by publishing their research in leading international journals, attending international conferences, and winning research scholarships from competitive international academic and business foundations.

However, a sharp decline in the number of senior faculty members poses a difficult dilemma for the Institute. The average age of high ranking academics at the Institute is significantly higher than at Israeli universities. Between 2007-2012, the number of associate professors fell by 60% (from 15 to 6). Moreover, we expect to lose another 3 associate professors over the coming year. It should be noted that a low number of associate professors entails a significant risk for the Institute of losing the ability to award full professor status in the fields where it is presently entitled to do so (independently of the CHE's appointment committee) – Applied Mathematics and Engineering. Furthermore, over the coming years a massive retirement of senior faculty members from all faculties at the Institute is expected.

Hence, the Institute must prepare accordingly and streamline as soon as possible its processes for hiring new academic faculty members and making academic appointments. In particular, the Institute must devote special funds to hiring outstanding faculty members in those fields of knowledge which constitute the cutting-edge of advanced technologies today, such as Big Data, Cyber Security, Machine Learning, and more.

The Institute, therefore, will seek to:

- **Locate and hire young and outstanding faculty members** The Institute will launch as soon as possible a campaign for locating and hiring fresh young faculty members. To this end, the Institute will build a comfortable and supportive work environment, which will encourage research, production and offering new courses and specializations (such as by diverse encouragement grants, reducing the teaching load in the first two years, or teaching relatively small classes), in an attempt to allow young faculty members to develop and advance quickly. The Institute will encourage and support the hiring of Israeli academics currently residing abroad, especially those interested in settling in Israel.
- **Locate and hire select academics from the business community** As part of its effort to strengthen the academia-business relationship, the Institute will absorb academic faculty members who currently hold research and development positions in hi-tech companies, who will be able to complement their career with an academic-research track at the Institute, alongside their applied R&D industry position (a win-win situation for the Institute, businesses, and the faculty members themselves).
- **Improving and altering appointment and promotion procedures** The Institute will shorten the length of the appointment procedures, with the intention of improving its competitive advantage over other institutions in hiring young and talented faculty members. In faculties where the number of professors is relatively high, such as the Faculty of Engineering and Faculty of Sciences, appointments to the positions of lecturer and senior lecturer will be made through the faculty appointment committees.
- **Fostering excellence among faculty members** The Institute will encourage and support research and production by academic faculty members in general, and young academics in particular, by establishing an internal fund – the Presidential Fund for Research and Production, as well as different support and assistance opportunities attainable through the Institute's Office for Research, Development, and External Relations.

## GOAL 3: INCREASING THE NUMBER OF STUDENTS, WHILE EMPHASIZING HIRING THOSE WITH A POTENTIAL FOR EXCELLENCE

The quantity and quality of students currently attending the Institute are crucial factors for its subsistence and prospering. Hence, in order to enhance its academic and financial viability, the Institute must establish a dynamic system, which will constantly succeed in enticing good students in creative ways, as mandated by the fierce competition in recent years in the market of higher education – a competition that may be expected to become even worse over coming years. For this purpose, the Institute must market itself to candidates, and especially to the more promising candidates, as an appealing institution which, while not a university, is not just another college, and which provides its graduates with a strong background of fundamental, applied and up-to-date knowledge, required for their success in the business world and/or continued study towards advanced degrees.

- The Institute will involve in the processes of branding and marketing the faculty deans, department heads, other faculty members, graduates and business figures from the 'Academia-Business' forum. The contribution of these faculty members will help fortify, pinpoint and distinguish the Institute's message to potential students.
- The Institute will determine the candidate's profile in accordance with the demands of different faculties (and departments), review how a potential candidate can be located and drawn to the Institute, and develop criteria for bestowing special grants for students and candidates with high achievements.
- The Institute will establish special programs for outstanding honors students, and allocate special funds to these programs: both through honors scholarships and by appointing faculty members and select mentors from the Institute and from the business community, who will seek to foster technological leadership among the honors students.
- The Institute will launch additional Masters programs, upgrade current Masters with dissertation programs, and increase the number of students in each of the existing Masters programs, while updating undergraduate programs with the appropriate required changes.
- The Institute will assist high-achieving undergraduates, by allowing them to concurrently enroll in graduate courses, as commonly accepted in universities, with a desire to increase the number of good students in graduate programs, and to allow honors students a continuous study program for attaining an undergraduate and graduate degree in five years.
- The Institute will encourage high-achieving students to attend interdisciplinary and multi-disciplinary undergraduate programs.
- The Institute will broaden and fortify its relations with businesses in all fields of its academic activity, while significantly expanding these businesses' involvement in accompanying, guiding and sponsoring students' final projects, entrepreneurial projects and different competitions, with an aim of increasing even more the number of students who are employed in their field of study during their degree and afterwards.



- The Institute will establish databanks of potential students from different segments of the population, whose rates of attendance of institutions of higher learning are typically low, including ultra-orthodox Jews, Druze, Circassians, Arabs and new immigrants. New designated study programs will target these groups, with the collaboration of commercial partners (such as the security industry) and government, who will take responsibility for question of the students' employment during the degree and afterwards.
- The Institute will strive to significantly increase the number of students of the pre-academic preparatory program who go on to pursue academic studies.
- The Institute will seek to significantly increase the number of candidates for academic study at the Institute among residents of Holon and its vicinity, as a part of increased efforts to collaborate with the community, and the Institute's contribution to the community at large.
- The Institute will refresh and expand the activity of its external studies program, will rebrand it as HIT's School of Associate Degree Studies, in the hope of drawing the best of the associate degree students to attend the Institute (by accrediting particular courses from their associate degree).





## GOAL 4: PROMOTING WOMEN AT THE INSTITUTE

Promoting gender equality at institutions of higher education has been described by CHE as a primary objective over the coming years, both for reasons of justice and fairness and for reasons of enhancing academic excellence and realizing human capital. The Institute sees itself as committed to promoting gender equality and fair representation of women, while at the same time maintaining a level of excellence both among faculty, administrative staff and students.

The Institute is committed to reflecting the values of promoting women in its various regulations, among else by creating conditions that will be more accommodating to pregnant women, women on maternity leave and women undergoing fertility treatments, in accordance with the CHE guidelines for gender equality.

- The Institute will encourage promoting women in the fields of technology and design, while creating supportive frameworks for honors students, including designated study scholarships, supportive professional counseling during their studies, and female mentors who will guide the students during their studies.
- The Institute will launch a review into how women are faring in different faculties, so as to discover special needs and find, as far as possible, institutional remedies for any problems that might be discovered.
- The Institute's website will help promote women at the Institute by highlighting information relevant to women's academic promotion, including information about scholarships and grants, events, rights, and more.
- The Institute will create a special committee, with the aim of identifying women's characteristic needs at the Institute, and deliberating on institutional ways those needs can be satisfied. The Institute will take pains to identify suitable candidates among the academic faculty, while insisting on their professional level.
- The Institute will seek to secure gender balance among faculty members, by removing obstacles preventing women from promotion, if such are discovered. The Institute will assist women in reaching research objectives, according to the guidelines laid down by the CHE/PBC.
- The Institute will provide a satisfactory supportive environment for female faculty members and administrators, and bring up for discussion several issues related to women, including scheduling special conferences, an online women's forum, and more.
- The Institute will seek to serve as a central stage for women in the surrounding social space, and offer, among else, enrichment programs for high-achieving female high school students, aiming to expose them to technological subjects while still in school.
- The Institute will offer seminars and conferences on diverse subjects of study from a perspective of women's rights and gender equality.



## GOAL 5: IMPROVING RELATIONS WITH BUSINESSES AND ACADEMIA BY FOUNDING ADVANCED PROGRAMS FOR APPLIED RESEARCH AND INSTRUCTION

Collaboration between the Institute and businesses and academic institutions in Israel and abroad is a crucial factor for the Institute's continued existence and development. The Institute is interested in improving existing collaborative relations and creating new ones, especially with different businesses, out of a desire to respond to the growing shortage of experienced manpower in Israeli businesses and the economy. The Institute's geographic location, in the heart of Holon, gives it a competitive advantage in easy access to the new hi-tech industry centers in Holon, Rishon Letsion and the vicinity. As stated above, the Institute recently joined with the city of Holon to found the 'Academia-Business' forum, which will broaden and fortify the bond between academics, business, and local government. This collaboration will help further innovative academic-technological initiatives, such as development of new study programs, building innovative technological infrastructures, organizing conferences and seminars and integrating faculty members and students into commercial developments in the urban environment.

- The Institute will confer with industry experts in the planning and development stages of new study programs, specializations and new courses, as well as allow them to take an active part in teaching courses and workshops, and mentoring final projects in different faculties.
- In the course materials of various program, emphasis will be placed on exposing students to actual problems from the business world, and to innovative and creative solution strategies which combine tools for coping with ever-changing practical circumstances.
- The Institute will seek to introduce into the different study programs, with the help of business companies, tools for acquiring skills needed for graduates in the business world (such as systematic vision, the ability to analyze complex systems, research skills, independent thinking, and creativity).
- The Institute will develop, expand and improve existing relations in research, production, instruction, and holding common conferences with leading academic institutions in Israel and abroad. Through its Office of Research, Development and External Relations, the Institute will support and encourage its faculty's research and production, as well as encourage faculty and students to participate in national and international projects, teacher and student exchange programs, the publication of articles, journals and monographs, and studying together with scientists from other institutions.
- The Office of Research, Development and External Relations will encourage faculty members to participate in Israel's Chief Scientist's R&D programs, as well as in bi- and multi-national funds (including Horizon-2020), with the hopes of involving its highest-achieving undergraduate and graduate students in winning R&D projects. For this purpose, the Office (together with the Chief Scientist) will schedule meetings for establishing new personal contacts and brainstorming, which will feature, besides the faculty members and students, also leading business and hi-tech companies.



- The Institute, through its Office for Research, Development and External Relations, and the commercialization firm 'Aytit', will set up channels for encouraging and supporting the promotion of student and faculty ideas, and their development into hi-tech companies, with the guidance of the Chief Scientist and/or business companies.
- The Institute, through the commercialization firm 'Aytit', will append 'clinics' to the different faculties, which will serve beginning entrepreneurs, hi-tech and business companies in the fields of research, development and production (of prototypes in the Institute labs). These projects will employ faculty members and honors students in the processes of research, development and production.
- The Institute will encourage mentoring programs for students by HIT alumni and businessmen and women, whose purpose will be to assist students during their studies, and especially in the job-hunting stage.



## GOAL 6: FOUNDING CUTTING EDGE CENTERS FOR MULTI-DISCIPLINARY APPLIED RESEARCH, WITH THE COLLABORATION OF ACADEMIA, BUSINESSES, AND OTHER ORGANIZATIONS

As an academic institution committed to promoting applied research in Israel, the Institute has recently begun establishing multi-disciplinary applied research centers, with the collaboration of academia, businesses, government and other organizations. These research centers will seek to promote innovative new centers for research of subjects which have not yet been properly addressed by Israeli academia, and will group together researchers from different disciplines, as well as high-achieving students from the Institute and elsewhere.

- Each center will emphasize collaborating with companies and relevant business partners in applied research activity, with the aim of providing applied solutions for real problems and needs in the center's activity fields.
- These centers, besides being centers for applied research, will also host new multi-disciplinary courses, conferences and workshops in their fields of interest.
- The purpose of these centers is to position each center, to market it and give it a place of honor in the national and international academic-research community, among businesses and interested government agencies. Moreover, each center will seek to be a magnet for researchers and high-achieving students, and with the support of all its partners, might also be able to provide research grants.
- The following are multi-disciplinary research centers which the Institute has either already started building, or is scheduled to start soon:

**M3IC – Multimodal huMan Machine Interfaces Center** – a multi-disciplinary applied research studying multimodal human-machine interfaces, and grouping together scholars from Engineering, Technology Management, Ergonomics, Computer Science, Applied Mathematics, Design, Visual Communications and Instructional Technologies.

**CARE – Center for Applied technological Research for the Elderly** – a multi-disciplinary applied research center, a product of a partnership between the Institute and Maccabi Health Care Services. This center focuses on developing and adapting technologies for elderly people, grouping together scholars and practitioners from various disciplines (including Engineering, Science, Design, Visual Communications, Health, Welfare, Gerontology, Technology Management, and more). The center's activities will regularly involve government offices (including the Ministry of Health, Ministry of Welfare, and Social Security), business companies (including hi-tech companies and entrepreneurs), and non-profit companies working to help elderly people.

**BiMeD – Big Medical Data Center** – An applied research center for developing methodologies and tools for coping with the Big Data challenge in the health care world. The Big Data challenge is felt in many different disciplines, but in the health care world it has already begun creating problems that make it difficult to give quality, appropriate and efficient care in reasonable time, especially when we are dealing with complex chronic patients and/or patients dealing with several chronic illnesses (comorbidities). The center will group together researchers





from a variety of fields: Medicine, Computational Epidemiology and Biostatistics, Computer Science, Applied Mathematics, Information Systems, and more.

**CIU – Center for Interaction and Usability** – this research center will work to develop methodologies and tools for usability tests, which are one of the most important research tools today in shaping the user's experience; these tests introduce the product to an existing or potential users, and see how users deal with it (mobile application, website or desktop application). The center will bring together researchers from the following disciplines: Instructional Technologies, Design, and Computer Science.

**AIH – Academic Innovation Hub** – an applied research center emphasizing the various aspects of innovation, multi-disciplinarity and media studies: human-human interface, human-machine interface, and the like. The center will include a few subdivisions, such as an interactive lab, M3IC center, a business negotiations and innovation center, and a center for systemic and multi-disciplinary thinking.



## GOAL 7: DEVELOPING PHYSICAL INFRASTRUCTURE FOR EXPANDING THE INSTITUTE

Developing the Institute academically also calls for a broad consideration of infrastructure issues, namely how the existing physical infrastructure can be expanded and upgraded, as well as how new infrastructure can be constructed. This will include classrooms, research and instruction labs, faculty offices, and different zones that will service the students. As of today, buildings stand on 22,000 square meters of the campus, and can be potentially expanded to cover 84,000 square meters.

- The Institute will prepare the blueprint for construction on campus, including new buildings for the Faculty of Engineering and Faculty of Technology Management.
- The Institute will review all aspects of the 'dormitories' project and reach a final decision on the subject.
- The Institute will review options for expanding the campus and constructing on it, corresponding to the student growth rate, and will set priorities for the building process. This activity will take place with the full collaboration of the Holon city authorities.



## GOAL 8: ANCHORING THE INSTITUTE IN ITS URBAN SETTING, WHILE IMPROVING AND EXPANDING COLLABORATION WITH MUNICIPAL AUTHORITIES

Thanks to the extensive work of the city council of Holon in the fields of education, culture and leisure, the city of Holon is now recognized nationally as a city of culture and education, which features unique institutions such as the Children's Museum, Mediatheque, Museum of Design, Story Gardens and more. The promotion of the Institute to university status would allow Holon to market itself as a university city on the national and international levels. As is the case in other cities in Israel and abroad which host universities, the Institute could contribute much to Holon's development and prospering.

Several collaborative enterprises exist already between the Holon city council and the Institute, and several more are planned, including:

- Establishing and maintaining academic counseling to a professional school of design and engineering, whose highest ranking graduates would be able to continue their studies at the Institute.
- The Institute will expand its program for honors high school students, 'Metsuyanoar,' and set up programs allowing honors high school students to gain credits towards a degree in any of the different faculties. These students would then be able to pursue their studies at the Institute after the completion of their high school studies and/or mandatory military service.
- The Institute will assist in planning and establishing a continuous multi-disciplinary program in science, technology and design for children from elementary through high school.
- The Institute will lend support in organizing city-wide championships and competitions in mathematics, computer science, physics and robotics. These competitions will allow the Institute to identify high-achieving students in Holon and its vicinity, and prod them (among else, with the help of grants) toward academic studies at the Institute.
- New after-school enrichment classes will be offered for high-school students at the Institute's labs and research centers. The Institute will organize and give academic sponsorship for city-wide events in the fields of sciences, technology and design.
- HIT's School of Associate Degree Studies (formerly, the External Studies Program) will be remarketed as a center for vocational training, enrichment and leisure for city residents.
- Local government authorities (city hall, local organizations and residents) will be integrated with the work of the CARE research center, and will help research and adapt technologies for elderly people (for example, by helping run experiments spreading innovative technologies among the city's elderly residents, operating counseling activities, and more).
- The Institute will make use of its television studio and radio channel to strengthen community-academia relations, by broadcasting programs dealing with different activities in town in the fields of education, culture, sports and leisure, welfare, health services, and special events around town. The Institute will also convene experts to hold discussions on research topics germane to the Institute that might be of interest to residents.



## GOAL 9: IMPROVING THE INSTITUTE'S CONTRIBUTION TO ISRAELI SOCIETY IN MAKING HIGHER EDUCATION MORE ACCESSIBLE

As part of the CHE/PBC program for expanding academia access to different segments of Israeli society (ultra-orthodox Jews, Druze, Circassians, Arabs, Ethiopian immigrants, and other new immigrants), the Institute will create academic and pre-academic study frameworks for these different groups, in hopes of helping support this important national task.

- The Institute will establish relations with non-profit organizations and associations dedicated to extending access to higher education in Israel to disadvantaged segments of the population, and collaborate with them in creating academic and pre-academic study programs for these groups.
- At the same time, the Institute will seek to establish collaborative relationships with training, manpower firms and business companies through its School for Associate Degree Studies, with the hope of establishing frameworks in the business world for absorbing graduates, as well as for training students for immediate employability during their studies. These arrangements will provide students from disadvantaged social groups, and especially ultra-orthodox Jews, with the opportunity to support themselves honorably during their studies at the Institute.
- Since 2001, the Institute's 'Academia' program has supported students from Israel's peripheral zones, emphasizing especially student from those minority groups that are least represented among Israeli engineers, scientists and technology workers. The Institute will further expand this program and seek to draw in additional students from all over Israel.
- In the past, the Institute collaborated with the Ministry of Immigration Absorption in the Masa program. As part of this program, students from Argentina, Uruguay, Brazil, France, South Africa and the former Soviet Union attended the Institute. The program was put on hold by Israel's previous president. The Institute will restore the program and seek to draw into it foreign students who have immigrated to Israel.
- The Institute will welcome different population segments from Holon and the vicinity for lectures, meetings and courses in the School for Associate Degree Studies, in a variety of technological and social subjects.





## GOAL 10: IMPROVING THE INSTITUTE'S BRAND NAME AND REACHING OUT TO RELEVANT TARGET AUDIENCES

Rebranding the Institute and exposing its advantages as a dynamic academic institution and leader in the fields of technology and creativity could have a great effect in drawing good potential students, hiring high-quality academic faculty and improving its reputation.

- The Institute will labor relentlessly to rebrand itself as a leading institution in the realm of higher education, while making efficient use of extensive marketing, advertising and media tools. The Institute will try to bring different heads together to confer about the process of branding and marketing, including faculty deans and department heads, other academic faculty, alumni and business people from the 'Academia-Business' forum who might want to contribute to the topic. The objective of this effort will be to conclusively demonstrate the Institute's competitive advantage and distinguish it from other institutions of higher education.
- The Institute will encourage faculty members to participate in international conferences, advertise their studies in international journals, and submit research proposals for competitive funds in Israel and abroad, thus increasing its exposure in the academic world.
- In the past, the Institute published an international journal in Engineering and the Sciences. The journal featured important research papers of leading scientists and scholars from Israel and abroad. The Institute will consider resuming the activity of the journal, thereby making the Institute better known to the international sciences and engineering academic community.
- The community will vigorously work to rebrand itself among businesses in Israel and abroad as a leading institution for academic training in the fields of Sciences, Technology, Design and Management, and as a leading applied research institution in these fields, while emphasizing its collaborative partnerships with businesses in Israel and abroad.
- The Institute will seek to convene, host and be a partner in important national and international conferences in its fields of specialization and as an inseparable part of its research centers.



# GOAL 11: CONVERTING THE EXTERNAL STUDIES PROGRAM AT THE INSTITUTE TO A LEADING ASSOCIATE DEGREE SCHOOL

HIT's School of Associate Degree Studies will operate mostly in fields overlapping with those taught in the Institute's other academic programs. In courses offered at the school, students will become acquainted with useful information and subjects pertaining to the contemporary world's needs. The courses will offer concentrated versions of subjects taught in different faculties. Likewise, the school will offer associate degrees or continued education for graduate students, providing them with "personal and applied growth," while broadening their opportunities to find a place in today's challenging work environment.

- The School's activities will include special courses, training sessions and workshops for organized groups from businesses and other organizations. Advanced training programs will also be offered, as well as courses in Engineering, Technology Management, Sciences, Technology and Design for groups from Israel and abroad, associate degrees in collaboration with leading companies from the professional training field for soldiers finished with their mandatory service (and supported by army grants), as well as alumni interested in improving their chances of admission to competitive workplaces and/or be promoted at their workplace (continued education).
- Likewise, the School will offer the public at large enrichment courses on different subjects in the fields of technology, design, management, and relevant current affair topics.
- The School will hold e-learning courses in a variety of subjects, in several languages, for the benefit of audiences in Israel and abroad.
- The School will join the Institute's effort to make higher education more accessible to different segments of the Israeli population, through holding professional training courses before and/or during academic studies, with the goal of helping students from these segments, and especially ultra-orthodox students, support themselves honorably during their studies at the Institute, and improve their chances of being hired for leading positions in the business world after the end of their academic studies.
- The School will maintain a tight and continuous working relationship with the city councils of Holon and other cities in the vicinity, as well as with the Institute graduate forum, and will occasionally offer courses at reduced prices for residents and graduates.



## GOAL 12: FORMULATING AN ETHICAL CODE FOR THE INSTITUTE REGARDING INSTRUCTION, RESEARCH, ADMINISTRATION, AND DAILY LIFE

Ethical codes are designed to state firmly a set of moral principles for the Institute as an Israeli institution of higher education, so that these may guide the faculty and administration members in their daily work. The ethical code will proclaim what is expected of them in instruction, research, advertising and running the Institute, and will be used to settle disputes and contradictions which inevitably arise in complicated systems.

Similarly, the ethical code is meant to indicate to students, various government, commercial, or other parties, as well as the public at large, the nature of the Institute's activity, in relation to its objectives, goals, and constitutive values, so that they may understand the Institute when they relate to it as consumers, or when they attempt to influence its activity as interested parties.

- The Institute finds great importance in formulating an ethical code for its activities, which will function as warning signs regarding what is permitted and forbidden, favored and frowned upon, for the perusal and use of faculty, administrators and students, and will work to create such a code.
- An ethical code is not a legal document, and cannot serve as a basis for legal processes. However, substantial and systematic divergences from the ethical code and its rules could be considered as cause for taking significant measures. The Institute's proposed ethical code will not replace existing rules and regulations, but rather complement them.
- The Institute will establish an internal ethical committee, whose chairman will be appointed by the Institute's president. Its members will be elected by the Institute's academic council and will include faculty and administration members, a legal advisor and a public figure. The committee will work on formulating the ethical code, and afterwards implementing it within the Institute.
- The Institute is convinced that formulating and applying its ethical code universally will make the Institute a worthwhile place for both faculty and students.



## GOAL 13: FUNDRAISING FOR FURTHER DEVELOPMENT OF THE INSTITUTION'S TEACHING, RESEARCH, AND INFRASTRUCTURE

Fundraising in Israel and abroad is crucial for the continued development and prospering of the Institute in teaching, research and production. The Institute will devote a maximum effort, and make use of its different strengths to increase the rate of fundraising in Israel and abroad. Donations will be used to build labs and unique research centers, construct new buildings and renovate existing structures, provide needy and high-achieving students with scholarships, organize national and international conferences and seminars, and encourage research and production at the Institute.

- The Institute will develop and strengthen its existing ties with public figures in Israel and abroad in order to solicit contributions for the Institute, while safeguarding the Institute's independence.
- The Institute will appeal to Israeli and foreign companies and organizations to help finance scholarships for students studying at the Institute's different programs, and especially for students from minority groups and/or groups with insufficient access to higher education.

