COUNCIL FOR HIGHER EDUCATION
המועצה להשכלה גבוהה
مجلس التعليم العالي

Planning & Budgeting Committee ▪ הועדה לתכנון ולתקצוב

**Committee for the Evaluation of Academic Quality for Industrial Design Studies**

Evaluation Report

# Technion – Israel Institute of Technology

## Department of Industrial Design

Academic evaluation January 13-14, 2008

**Background**

At its meeting on October 31, 2006 the Council for Higher Education (CHE) decided to evaluate study programs in the field of industrial design during the academic year 2006-2007.

Following the decision of the CHE, the Minister of Education, who serves ex officio as the Chair of the CHE, appointed a committee for the evaluation of academic quality of industrial design studies consisting of:

- **Prof. Rosanne Somerson** Department of Furniture Design, Rhode Island School of Design, U.S.A., Committee Chair
- **Prof. Gabriela Goldschmidt** Faculty of Architecture & Town Planning, Technion – Israel Institute of Technology, Committee Co-Chair
- **Prof. Edward Colker** retired Professor and Provost, Pratt Institute, U.S.A
- **Prof. Haim Finkelstein** Chair of the Department of the Arts, Ben-Gurion University of the Negev
- **Prof. Jan-Christoph Zoels** Senior Partner, Experientia, Italy
- **Ms. Alisa Elon** Coordinator of the committee on behalf of the CHE.

Within the framework of its activity, the committee was requested to submit the following documents to the CHE:

1. A final report for each of the institutions, which would include an evaluation of industrial design study programs, the committee's findings and recommendations.

2.1 A general report regarding the status of the evaluated field of study within the Israeli institutions of higher education.

2.2 Recommendations for standards in the evaluated field of study.

The committee will submit independently to the CHE the documents specified in point 2 above.

The committee's letter of appointment is attached as *Appendix 1*.

The first stage of the quality assessment process consisted of self-evaluation, including the preparation of a self-evaluation report by the institutions under evaluation. This process was conducted in accordance with the CHE's guidelines as specified in the document entitled *"The Self-Evaluation Process: Recommendations and Guidelines"* (December 2006).

## Committee Procedures

The Committee held its first meeting on October 23, 2007. At this meeting Committee members discussed fundamental issues concerning Industrial Design study programs in Israel and the quality assessment activity.

During the period December 2007 - January 2008, Committee members conducted a two-day visit to each of the institutions offering study programs in the field under examination.

During these visits, the Committee met with the relevant officials at the institutions in accordance with the structure of each institution, as well as with faculty members and students, and also conducted a tour of the campus.

In view of the fact that Prof. Gabriela Goldschmidt is a faculty member at the Technion and in order to prevent the appearance of a conflict of interests, Prof. Goldschmidt did not participate in the evaluation of the Industrial Design study program at the Technion.

This report deals with the **Department of Industrial Design at the Technion – Israel Institute of Technology (the Technion).**

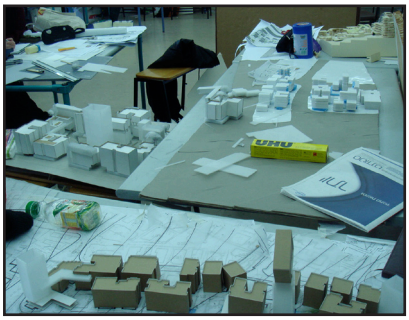
The Committee's visit to the Technion took place on January 13-14, 2008. The schedule of the visit, including the list of participants representing the institution, is attached as *Appendix 2*.

The Committee members thank the management of the Technion and of the Faculty of Architecture and Town Planning and of the Industrial Design Program for the self-evaluation report and for their hospitality towards the Committee during its visit.

# Evaluation of the Industrial Design Program at the Technion

**Background**

The Technion is a publicly-funded university which opened its doors in 1924. It comprises 18 academic units. The self-evaluation report states that during the academic year 2004-5 the Technion student population was 12,815, of whom 8,960 were registered for a Bachelor's degree, 2,461 for a Master of Science degree, 572 for a Master's degree, 822 for a Doctoral degree.



According to the self-evaluation report, the Faculty of Architecture and Town Planning was established in 1924, when the Technion first opened. The report also states that the following professional fields are taught in the faculty: Architecture and Landscape Architecture, Urban and Regional Planning, and Industrial Design (ID).

The Industrial Design study program in the Faculty of Architecture and Town Planning at the Technion is the only academic program of its kind in the country whose graduates are awarded an M.Sc. degree (with thesis). This program has been offered at the Technion since 1994 and was authorized by the CHE during that year.

The self-evaluation report states that at the time of writing there were approximately 60 students who had graduated from the program and that during the academic year 2006-7 there were about 60 students working towards their Master's degree in ID.

The Self-study report was very well written and clear. However, the Committee felt that the pedagogical emphasis of the Program as advanced level Industrial Design education through a research track was somewhat inaccurately portrayed by the report. The true nature of the Program became increasingly evident during the course of our visit. We discovered, for example, that this Program will not make a student without a design background into a designer. This led us to question terminology and representation of the Program as a Masters in Industrial Design, which immediately invites comparison with other international Masters Programs in the field. Without an apparent design development focus, this Program would appear weak if compared to other design-focused Masters programs. However, we did see great strengths and unique character in the Program at the Technion, and believe the identity needs to be better clarified and articulated to describe the educational excellence and opportunity that the Program offers. With this in mind, we spent the first stages of our visit trying to gain an accurate understanding of what the Program is and is not. We will reflect on this question throughout our report.

We recognized some inherent problems in the current structure of the Program. Since all students require Supervisors for their Theses, and since teachers are limited to the number of students they can advise, there is a shortage of available supervisors in relevant disciplines. One manifestation is that enrollment must be limited relative to the number of available supervisors, and research topics may be limited by availability of teachers with expertise in the changing field of theory and practice of design. This fact disallows growth of the Program without correcting the proportional relationship of teaching staff qualified to lead research in Industrial Design at a Masters level. Additionally, this shortage limits somewhat the types of research capacity in particular areas where there may be fewer or no potential supervisors. Currently, there is a serious shortage of Industrial Design teachers in the Program, and a study should be done to model possible enrollment projections with additional teaching staff. The Program **content** is also impacted by the lack of industrial designers on staff, a point that we will expand upon in the section on Faculty and Teaching.

Our visit to Technion was conducted during the time of the Senior Faculty strike, so we appreciated the cooperation and efforts made by teaching staff and students to participate in meetings with our Committee. We were unfortunately unable to meet with the President as he was engaged in work surrounding negotiations. However, because of the size and structure of Technion, we felt that we had access to upper level administrators who guided our visit and received our impressions.

## Mission and Goals

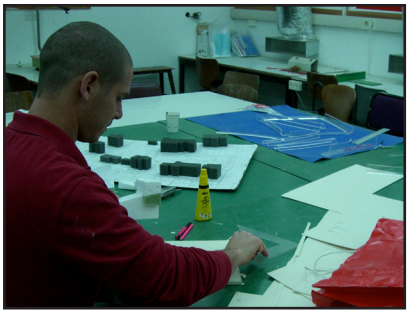
The mission statement of the study program discloses what is in effect its great strength and uniqueness. Its multidisciplinary approach is based on its openness to the Technion's broad array of engineering technologies, life sciences, architecture and environmental sciences, and on the extensive research opportunities that this entails. The Program is open to students from a wide range of backgrounds, whether in the design area or in engineering, social sciences, and the arts. The commendable goals of the Program as expressed in the report reflect its far-reaching aim to enhance the academic research training of professional designers, as well as to establish a more profound understanding, on the part of the engineering and scientific community, of the need for a greater integration of design thought in their professional endeavors. The Program thus aims to build an active research infrastructure that will leave its imprint on research and professional activities at the Technion as well as in the country at large.

What the Mission Statement fails to acknowledge is that, notwithstanding its formal title, the Program is not a run-of-the-mill Master's Program in Industrial Design. It is not meant to train professional designers in additional design skills, nor is it meant to create designers out of students coming from other backgrounds. Its strength rather lies in its emphasis on the collaborative nature of projects in which engineers, scientists and social scientists join hands with professional designers in an advanced research environment. Such collaborative effort will address the emerging research areas of "social design" (design for special populations, design in the medical field, etc.), computerization and technology, and perception processes in industrial design, and will place design as an integrative dimension of advanced technology.

**Recommendation:** Technion should rethink the nomenclature and representation of the Program to more accurately reflect its strengths and unique character.

## Study Program

One of the unique strengths of the Technion is the superb range of access to Faculties relevant to design disciplines, such as Engineering, Computer Sciences, Life Sciences, Ergonomic Studies, Industrial Management, Biotechnology, and so on. The extensive resources and areas of expertise represented within Technion are both unique in Israel and impressive on an international scale. There may be no comparable institution that offers such a diverse range of opportunities that can be integrated within the research of Masters students in Industrial Design anywhere. Further, there appeared to be genuine willingness on the part of teaching staff from many disciplines in working with Industrial Design students and aiding in the development of their research. The study program is predicated on this assumption, and our impression was that it is supported in the experience of students to a large degree. In some instances, students felt that their research topics were not encouraged, but the majority of students and alumni were enthusiastic about their ability to conduct cross-disciplinary research with experts in the other fields. The caliber of research appeared rigorous, and students had access to equipment and resources that enabled them to conduct deep level investigations.



The Program is intended to educate students from heterogeneous disciplinary backgrounds, in an effort to diversify the climate for exchange and growth. This is commendable. However, the result requires different core study goals for those with design backgrounds and those students without design backgrounds. The "designers" generally needed to learn research strategies and protocols, while the "non-designers" needed some form of design studio immersion. Our finding was that in either case, the design studio experience was somewhat "front-loaded" and less integrated into the research stages of the Thesis. We believe

that the research aspects of studio work were not utilized to their full advantage in a research-based design program. Furthermore, we found the work produced in the studios to be rudimentary and not representative of Masters level work. We will elaborate on these last two points in the Research and Students and Learning sections.

Though the Mission is clear and well situated within the vast resources of the Technion, the identity of the Program itself needs clarification. Some teaching staff and administrators described the Program as more "design management" rather than Industrial Design. However, there are Design Management degrees that reflect a structure that conjoins design, business and international studies education. The Program at Technion is not structured this way. If the goal is to educate students to be team leaders in design industry they would need more design background and perhaps more business. What we observed is that students were using a model of research paralleled more closely to scientific research than to design research strategies (we will expand in Research section) and therefore found truer expression of the program to achieve quality education in design science research. This is an under-developed field with no available degree in any other institution that we are aware of, and might be an interesting direction for Technion to lead.

It should be noted that the interest in the non-thesis degree should not detract from the urgent need to improve and enrich the current program.

**Recommendation**: Without trying to become a design development program, Technion needs to bring in additional design expertise to deepen the collaborative essence of the research undertaken, and should utilize design issues and process to encourage the addressing of research outcomes with innovative and fully resolved design solutions.

## Faculty and teaching

The teaching aims and perceived strengths of the ID Program are stated as **interdisciplinary** – in varied backgrounds of the master's candidates, **flexibility** - in wide range and choice of creative investigation, and **research** – in serving as the basis for this advanced degree. There is, however, a clear lack of full position teaching cadre for the program particularly in light of presently 1.5 lines (of which only the .5 is filled with an industrial designer) rather than the initially promised 4 positions. We recommend immediate increase in teachers drawn from industrial designers who are also in professional practice, but who are awarded full faculty status, even if they are assigned half-time teaching, as well as industrial designers with strong background in culture and theory relative to their field.

Currently, co-supervisors for the ID thesis work are primarily teachers from Technion. Those whom we met with were gracious, seriously involved in assisting, and pleased with the character and quality of both the ID students and their proposals. ID students currently in the Technion Center for Work Safety and Human Engineering were also well regarded by its Director. The only problem seems to be that of students seeking and finding busy Technion teachers who can give time and attention to ID thesis projects. Advanced students in the program felt the need for recruitment of additional industrial design faculty to provide a "critical mass" of teachers and mentors.

Technion administration and committees will, however, have to adjust their customary thinking and usual requirements for granting appointment and advancement to faculty members who are distinguished in their creative/ professional field but not holders of the doctoral degree. It should be understood that the terminal degree for industrial design is universally seen as the Master's, not a Doctorate. Criteria that would be considered equivalent to high achievement in industrial design would include publications in leading design magazines and periodicals, presentations in international conferences and competitions, design awards, extended engagement with international design organizations, speaking engagements, international consultancies, exhibition participation in significant galleries, museums, and industry fairs (i.e Milan Salone del Mobile), and works in productions that advance innovation. It is unfair to expect achievement in all of these areas, but this list can inform a basis for evaluation criteria.

It should be noted, that related to overall Technion campus collegiality, teachers and some students have a sense that Industrial Design (and perhaps Architecture and Planning as well) are not held in as high esteem as are the "hard sciences". Perception of this kind should be dispelled whenever possible in the interest of high morale and Technion's distinguished reputation.

There is no current cultivation of younger junior faculty. As the Program's sole industrial design teaching staff member may retire in a few years, we recommend that the Technion allow an overlap extra line of a Junior Faculty member, a temporary "extra" position that would allow a period of time (or one semester or one year) where retiring teachers could assist a new younger teacher to the potential and complexities of the position, and thereby to help develop this teacher within the Program. Consideration should also be given to the student's requests for additional teaching of design theory.

**Recommendation**: Teaching staff should be increased as described above including on overlap line for a junior faculty member.

**Research** The strength of the ID masters program at Technion is its academic research focus within the wider context of the diverse faculties. Graduate students learn to research according to rigorous academic standards under the guidance of Faculty staff. This leads to in-depth academic theses and follow-up papers in relevant academic publications.

Research is guided by individual teachers or supervisors and needs to fit within the research areas of the supervisors. This provision is a strength and a limitation of the current program as it guarantees a strong research relationship between supervisor and graduate student, but also eliminates any research topics not falling into the interest areas of available supervisors. The low number of available supervisors with insight into the changing theory and practice of design further limits opportunities. This results in waiting lists to research with these teachers. The committee heard about multi-year efforts to find supervisors and the resulting demand to change thesis proposals to gain their acceptance.

Recent research theses exhibited strength in areas of inclusive design (special needs and populations, medical equipment, environments and applications, e-health and well-being etc), extreme environments, human-computer interaction as well as design theory and perception. The individual nature of the thesis, the isolation of students who are presently working in industry, and the current lack of shared research or studio facilities results in a loss of immersion and knowledge exchange within these significant, developing research areas.

Secondly, the committee observed a lack of interdisciplinary collaborations beyond individuals' activities across Faculties. The richness of Technion's resources is not being utilized. Furthermore, the lower perception of ID as a professional degree limits the due appreciation of research achievements and the Program's contribution to other Technion research programs This is in stark difference to international developments in joint research programs across engineering, management, international studies, behavioral sciences and design programs worldwide. Examples of these integrated research programs are the 'D'-school in Stanford, USA; Carnegie-Mellon's design program, the School of Design at IIT, Chicago, USA; Rotman School of Management, Toronto, Canada; interdisciplinary design programs at University of Delft and Eindhoven, Netherlands; University of Arts & Design in Helsinki, Finland etc.. To offer substantial contributions within these interdisciplinary collaborations Technion needs to strengthen/hire teaching staff in ID with professional and/or research expertise in these areas.

Thirdly, the current focus on quantitative and empirical research methods needs to be expanded by a wider range of qualitative research methods such as design ethnography and contextual inquiry, case studies, etc. Elective classes need to strengthen these and other research and design methods. Jointly used

prototyping (beyond the current model making workshop) and usability testing facilities will need to be developed. Possible prototyping facilities or equipment needs include a physical computing lab for software and electronics and a 3D digital prototyping lab. Testing facilities need to include a usability lab and resources for contextual video ethnography. All of these facilities can be shared across departments and Faculties. ID students need access to existing, similar facilities to support their research efforts.

The Thesis needs to translate research findings into iterative design solutions (research, concept and design, prototyping and testing). A key element will be the integration of analytical and synthetic research practices. Current research efforts underestimate the importance of intuitive design thinking and explorative studio practices. Research is well understood in application of empirical research data; however, research insights from studio investigations are less effectively integrated into final thesis results and research goals.

Industry-sponsored projects could augment interdisciplinary collaborations, provide research funding and add an applied research dimension to the Program. These activities should be located in a new Center of Excellence, earnestly recommended by the Committee. This could also serve as an incubator for further development of new products, services, and applications. Funding income will allow for the diversification of teaching and research staff and the inclusion of distinguished practicing designers.

The current infrastructure for intellectual property (IP) evaluation, business development and commercialization is well established and needs to be further utilized by the Program. Thesis papers and projects need to be evaluated early on for outstanding ideas and insights, with the aim of gaining further support to allow them to be introduced and advanced in the business development unit. Innovation and commercialization criteria will need to be added to current research criteria. A culture of entrepreneurship needs to be encouraged.

**Recommendations**: Create Centers of Excellence such as a Center of Inclusive Design etc, that take full advantage of the interdisciplinary nature of the research and the goals of the Program.

Provide incentives and support for research and project-based collaborations across faculties. Increase awareness of student research among potential supervisors in other Faculty to improve opportunities for collaboration and a more extensive pool for thesis guidance in order to address the needs of a growing program and expanding fields. Insure that in selection of new faculty members, that excellence in other research methodologies (than those currently employed) is a main criterion.

## Students and Learning

Students at Technion are accepted through a highly selective admissions process. We found this reflected in the high caliber of students. We noted the apparent commitment, maturity, and intellectual capabilities of students and alumni. Students were very positive about the challenging aspects of their studies, and felt well supported by dedicated teachers with proven expertise in many fields.

Consistently, however, students expressed the desire for more design studios, and more design studio integration with their research. They expressed some level of disconnect between the limited access to studio experiences, and the undertaking of the Thesis research and report.

Because many students work and many commute from considerable distances, they have limited time in which to attend courses. In some cases, course schedules were available very late, and it was difficult for students to create a study plan that worked with their employment obligations. They also expressed frustration that the workshops and labs have limited hours, which did not reflect the needs of working students and cited the need for increased evening hours and access.

Because of the fact that student study trajectories are individualized, students commented that a sense of community was lacking during the Thesis work. The studios and elective courses were the main opportunity for collegial peer learning, and they expressed interest in more exposure to each other's research. As students have no common work room or "homespace" the physical space does not support a shared learning environment experience.

Student design work, as mentioned, was a weakness. Students would also benefit from additional exposure to courses that teach presentation techniques, as the presentations that we saw were not on par with what would be expected in the field. If students are to be managers in design practices, these presentations would be unsatisfactory. Even if the content information is good, communication and expression of findings in a clear and dynamic format is an expectation within this design field.

The presentations and Theses that we reviewed were well done within the context of an initial stage of research. The quantitative data appeared substantial, well analyzed, and documented. But in most cases we felt that the end result was more of a research survey with conclusions, but these were not then translated into design solutions.

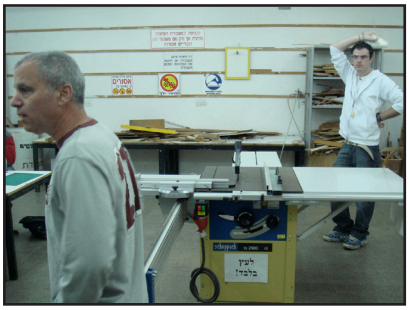
Students who attended the Program who completed undergraduate studies at the Technion naturally had a better understanding of the potential available resources. The Student Forum and orientations for new students seemed effective and valuable for students from other backgrounds.

The students were hesitant about taking courses in areas in which they lacked foundation knowledge and might receive lower grades. To encourage true interdisciplinary opportunity we recommend that students be allowed to take a small number of courses as pass/fail credit courses without jeopardizing their academic standing. This model is utilized in other high-level universities that support interdisciplinary study. It should also be pointed out that a more structured organization of the electives will be conducive to an effective array of courses related to the student's thesis work.

**Recommendation**: Increase the number of diversity of design studios and provide adequate studio classrooms for design development projects. Review schedules and access hours to facilities to better accommodate working students. Add a pass/fail option for a small number of Technion courses to enable students to take challenging offerings without prejudicing their academic standing.

## Infrastructure and Resources

Our tour revealed the following: There is no designated Industrial Design studio space or place where, on whatever size or scale, student teams might meet to develop projects, develop interdisciplinary work and/or exchange thesis ideas, which students believed would be a welcome addition. Collaborative research projects that might require physical developments manifested over time have no available space.



The design lab and workshop facilities that are shared by architecture, planning, and design students, in general appear to be ample in both size and in basic supplies as well as staffed by skilled technicians. Safety precautions and rules are posted, and we are told, observed (also subject to all-university health/safety inspection). The shops were neat and tools well-ordered with ventilation ducts in evidence. We suggest, however, that in the wood area, sawdust collection be improved with a centralized dust collection system, which would increase health and safety. In model making, when students are cutting Styrofoam or similar solvent based materials, we believe they should be wearing masks and the room be especially well ventilated. It appeared that present ventilation did not capture airborne particulates.

We urgently recommend that essential advanced digital prototyping equipment be acquired. In an institution poised for advanced cutting edge research, more up-to-date tools for research must be available. The self-study report noted that this request and general upgrade needs are to be submitted to the Dean by the Lab Committee; we recommend a positive response by the administration.

The Exhibition spaces are an attractive and inviting asset. However, limited opening hours provide little opportunity for other university students, staff, invited industry representatives, and the public at large to see impressive displays of creative work. We consider additional opening hours to be worthwhile.

Computer lab access seems well organized and well staffed. Photography studio/ lab was also impressive as was its gallery and its scanning/computer equipment.

The Library for The Faculty of Architecture and Town Planning was generally praised by students, graduates and teachers, particularly for the assistance provided by the library staff. Book purchase requests are honored and although there did not appear to be a large quantity of design texts, the students we met with are comfortable with the direct computer access to information sources, teacher assignments and selected periodical literature since many work at home on their projects/theses. Periodical and journal subscriptions were extensive. Suggested areas of improvement would be additional texts in design theory, design management and emerging areas of practice such as interaction, service, and systems design.

**Recommendations**: We urgently recommend that essential rapid prototype, 3-d printing and scanning and other advanced digital equipment be acquired by purchase or gift. This should be located near newly designated research project space, which must be added. Health and safety equipment in workshops should be further upgraded. The Library should improve the range of texts in newer areas of development in design fields.

## Quality Assessment Process

The Self-study Process at Technion was a substantial task for the Program Head because of the small size of the Program staff and the lack of secretarial support. Dr. Bitterman should be commended for producing a quality report. As teaching staff are coming from Faculties throughout the Technion, much of the work fell on her shoulders.

To take best advantage of the self-study process, we suggest that more group discussion be encouraged, with the delegation of particular areas of content and review of the results. Students and externals and some teaching staff and administrators had not seen the report. As these reports are intended to be constructive as self-evaluation tools, we suggest that a more inclusive approach be encouraged and supported by the University so that the workload allows the Program Head to create discussion opportunities rather than having to dedicate so much energy toward assembling institutional statistics and data. As more areas are assessed, this will inevitably improve. The senior management of the

Technion may need to become more directly involved so that dialogue between upper level administration and the Program can be maintained and expanded.

It was apparent by the differing views that we heard regarding the core mission of the Program, that discussions regarding vision, strengths and weaknesses were lacking. We believe the absence of clarity about Program identity and objectives would be remedied in a more participatory process.

## Summary

Technion's Industrial Design Master's Program is a unique Program in an excellent university setting admirably suited to forward its mission and goals. However it is not achieving its full potential due to a lack of institutional resources and a critical mass of teaching staff, as well as lack of accurate definition of its mission and goals. The Technion has not fully recognized the significance of the contribution that this Program can make to the institution as a whole. Without ample teaching staff and other resources, the Program has not fully developed a clear design identity, which is impacting the caliber of research undertaken and achieved.

## Prioritized Action Steps

Though we have presented these suggested areas for improvement in a prioritized ordering, it would greatly benefit the Institution if several of the recommendations were acted on with urgency at the same time, rather than one by one. We suggest that the following steps be used as a guide for prioritization, but that subsequent steps are initiated even if prior ones are not yet complete. We suggest that 18-24 months be targeted for achieving these changes, and that a three-year progress report with results of these changes indicated be submitted to the CHE.

We suggest that the following action steps be taken:

1. Increase teaching staff with an emphasis on practicing designers and design theory experts who are versed in contemporary practice issues, new materials, and new technologies. The goal should be to reach the initial promise of 4 permanent teaching staff members, even if one has a joint appointment with another area or program. A minimum of 3 should be designated Industrial Design full-time teaching staff.

2. Develop better communication throughout Technion for enhanced collaborative projects that best utilize Technion's strengths and expertise. Greater awareness of research interests and areas of excellence represented by various staff members would encourage the likelihood of cross-disciplinary courses and projects that utilize Technion's wealth of expertise.

3. Add more design studio courses with studio spaces for advanced design development as well as creating project space for ongoing research.

4. Articulate clearly the special character of the Program in a more accurate title and mission in order to highlight its uniqueness among other Master's Program in Industrial Design. Insure that structures, resources, and curricula support this vision.

5. Develop an updated digital prototyping facility.

6. Review and revise Technion policies that negatively impact Industrial Design such as appointment and advancement criteria for teachers, and pass/fail options for students.

7. Develop interdisciplinary Centers of Excellence for advanced research opportunities.

## Signed by

**Prof. Rosanne Somerson**
Committee Chair

**Prof. Edward Colker**

**Prof. Haim Finkelstein**

**Prof. Jan-Christoph Zoels**

מדינת ישראל

STATE OF ISRAEL

# Minister of Education

October 10, 2007

Professor Rosanne Somerson
Department of Furniture Design
Rhode Island School of Design
Two College Street
Providence, RI 02903
USA

Dear Professor Somerson,

The State of Israel undertook an ambitious project when the Israeli Council for Higher Education (CHE) established a quality assessment and assurance system for Israeli higher education. Its stated goals are: to enhance and ensure the quality of academic studies; to provide the public with information regarding the quality of study programs in institutions of higher education throughout Israel; and to ensure the continued integration of the Israeli system of higher education in the international academic arena. Involvement of world-renowned academicians in this process is essential, particularly as our nation reaches maturity in its 60th year.

This most important initiative reaches out to scientists in the international arena in a national effort to meet the critical challenges that confront the Israeli higher educational system today. The formulation of international evaluation committees represents an opportunity to express our common sense of concern and to assess the current and future status of education in the 21st century and beyond. It also establishes a structure for an ongoing consultative process among scientists around the globe on common academic dilemmas and prospects.

I therefore deeply appreciate your willingness to join us in this crucial endeavor.
It is with great pleasure that I hereby appoint you to serve as Chair of the Council for Higher Education's Committee for the Evaluation of Academic Quality for Industrial Design Studies.
The composition of the Committee will be as follows: Prof. Rosanne Somerson - Chair, Prof. Gabriela Goldschmidt Co-Chair, Prof. Ed Colker, Prof. Haim Finkelstein and Prof. Jan-Cristoph Zoels.
Ms. Alisa Elon will coordinate the Committee's activities.

In your capacity as a member of the Evaluation Committee, you will be requested to function in accordance with the enclosed appendix.

I wish you much success in your role as a member of this most important committee.

Sincerely,

Professor Yuli Tamir
Minister of Education, Culture and Sport
and Chairperson of the Council for Higher Education

*Enclosures:* Appendix to the Appointment Letter of Evaluation Committees

cc: Ms. Riki Mendelzvaig, Secretary of the Council for Higher Education
ms. Michal Neumann, Head of the Quality Assessment Unit

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October 07

# Appendix to the Letter of Appointment for Evaluation Committees (Study Programs)

## 1. General

On June 3, 2003 the Council for Higher Education (CHE) decided to establish a system for quality assessment and assurance in Israeli higher education. Within this framework, study-programs are to be evaluated every six years and institutions every eight years. The quality assessment system came into effect in the academic year of 2004-2005.

The main objectives of the quality assessment activity are:

- To enhance the quality of higher education in Israel;
- To create an awareness within institutions of higher education in Israel of the importance of quality evaluation and to develop internal self-evaluation mechanisms on a regular basis;
- To provide the public with information regarding the quality of study programs in institutions of higher education throughout Israel;
- To ensure the continued integration of the Israeli system of higher education in the international academic arena.

**It is not the CHE's intention to rank the institutions of higher education according to the results of the quality assessment processes. The evaluation committee should refrain from formal comparisons.**

## 2. The Work of the Evaluation Committee

2.1 The committee shall hold meetings, as needed, before visiting the institution, in order to evaluate the material received.

2.2 The committee shall visit the institution and the academic unit being evaluated – if possible - within 3-4 months of receiving the self-evaluation report. The purpose of the visit is to verify and update the information submitted in the self-evaluation report, clarify matters where necessary, inspect the educational environment and facilities first hand, etc. During the visit, the committee will meet with the heads of the institution, faculty members, students, the administrative staff, and any other persons it considers necessary.

2.3 In a meeting at the beginning of the visit, the committee will meet with the heads of the institution (president/rector, dean), the heads of the academic unit and the study-programs, in order to explain the purpose of the visit. At the end of the visit, the committee will summarize its findings, and formulate its recommendations.

2.4 The duration of the visits (at least one full day) will be coordinated with the chairperson of the committee.

2.5 Following the visit, the committee will write its final report, including its recommendations, which will be delivered to the institution and the academic unit for their response.

2.6 In the event that a member of the committee is also a faculty member in an institution being evaluated, he will not take part in discussions regarding that institution.

## 3. The Individual Reports

3.1 The final reports of the evaluation committee shall address every institution separately.

3.2 The final reports shall include recommendations on topics listed in the guidelines for self –evaluation, such as:

- The goals and aims of the evaluated academic unit and study programs.
- The study program.
- The academic staff.
- The students.
- The organizational structure.
- The broader organizational structure (school/faculty) in which the academic unit and study program operate.
- The infrastructure (both physical and administrative) available to the study program.
- Internal mechanisms for quality assessment.
- Other topics to be decided upon by the evaluation committee.

## 4. The structure of the reports

***4.1 Part A – General background and an executive summary:***

4.1.1 General background concerning the evaluation process, the names of the members of the committee, a general description of the institution and the academic unit being assessed, and the committee's work.

4.1.2 An executive summary that will include a description of the strengths and weaknesses of the academic unit and program being evaluated.

***4.2 Part B – In-depth description of subjects examined:***

4.2.1 This part will be composed according to the topics examined by the evaluation committee, and based on the self-evaluation report submitted by the institution.

4.2.2 For each topic examined the report will present a summary of the findings, the relevant information and analysis.

***4.3 Part C –Recommendations:***

4.3.1 Comprehensive conclusions and recommendations regarding the evaluated academic unit and the study program according to the topics in part B.

4.3.2 Recommendations may be classified according to the following categories:

- ***Congratulatory remarks and minimal changes recommended, if any.***
- ***Desirable changes recommended*** at the institution's convenience and follow-up in the next cycle of evaluations.
- ***Important/needed changes requested for ensuring appropriate academic quality*** within a reasonable time, in coordination with the institution (1-3 years)

- ***Essential and urgent changes required, on which continued authorization will be contingent*** (immediately or up to one year).
- ***A combination of any of the above.***

*4.4 Part D - Appendices:*

The appendices shall contain the committee's letter of appointment and the schedule of the on-site visit.

**5. <u>The General report</u>**

In addition to the individual reports concerning each study program, the committee shall submit to the CHE the following documents:

5.1 A general report regarding the status of the evaluated field of study within the Israeli institutions of higher education.

5.2 Recommendations for standards in the evaluated field of study.

**We urge the committee to list clearly its specific recommendations regarding each one of the topics, to ease the eventual monitoring of their implementation (both in the individual reports and in the general report).**

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**INDUSTRIAL DESIGN –FACULTY OF ARCHITECTURE AND TOWN PLANNING**

**TECHNION- ISRAEL INSTITUTE OF TECHNOLOGY**

**Tentative Schedule of Site Visit**

**13-14 January, 2008**

**Evaluation Committee meeting room - Segoe Building # 240 (the council room)**

## Sunday, 13.1.2008

| Time | Subject | Participants |
|---|---|---|
| **10:00-10:30**<br>Faculty of Architecture, Segoe Build. # 240 | **Opening session:**<br><br>Heads of the institution<br>Dean of faculty<br>Member appointed to deal with quality assessment | **Prof Yitzhak Apeloig** - President<br>**Prof. Paul Feigin-** Senior Vice President<br>**Prof. Moshe Sheintuch**- Deputy Senior Vice President<br>**Prof. Moshe Shpitalni**- Dean of Graduate School<br>**Prof. Yerach Doytsher** - Faculty Dean<br>**Prof. Naomi Carmon** - Associate Dean for Graduate school and Research |
| **10:45-11:15**<br>Segoe Build. # 240 | **Meeting with the head of the program** | **Dr. Noemi Bitterman-** Head of the Industrial Design Program |
| **11:15-12:45**<br>Segoe Build. # 240 | Meeting with representatives of relevant committees * | ▪ **<u>Faculty Preparatory Committee</u>**<br>**Prof. Yerach Doytsher**<br>**Assoc Prof. Daniel Czamanski**<br>**Assoc Prof. Rachel Sebba**<br>▪ **<u>Industrial Design program committee</u>**<br>**Arch Bilu Blich**<br>**Assoc. Prof. Ron Nabbaro**<br>**Assoc Prof. Rachel Sebba**<br>**Danny Shoshan**<br>▪ **<u>Students-Faculty Committee</u>**<br>**Arch Bilu Blich**<br>**Arch Ariel Tibi** |
| **13:00-14:00**<br>Segoe Build. # 600 | **Lunch** - At seminar room | Committee members with **faculty members**<br>**Arch. Bilu Blich; Dr. Eyal Karni, Assoc. Prof. Ron Nabbaro ; Assoc. Prof. Rachel Sebba; Dr. Abraham Yezioro** |
| **14:00-15:15** | Tour of :<br>▪ Studios<br>▪ Exhibition space<br>▪ Library<br>▪ Computer labs<br>▪ Photography lab<br>▪ Gallery | **Dr. Noemi Bitterman-** Head of the Industrial Design Program<br>**Arch Bilu Blich-** laboratory Committee<br>**Mr. Moti Grosman-** Head of Design Lab **Mr.**<br>**Mr. Dan Klinger-** Systems & Network Manager<br>**Hagai Segev-** Gallery Director<br>**Mr. Haim Singer** - Head of Photography Lab<br>**Ms. Michaela Zonnenshain** - Head Librarian |
| **15:15-16:00**<br>Segoe. # 240 | Closed-door working evaluation committee | |

## Monday, 14/1/2008

| Time | Subject | Participants |
|---|---|---|
| **09:00-09:45**<br>Segoe Build.<br># 240 | Meeting with senior academic staff* | **Prof. Emeritus Arza Churchman**<br>**Assoc. Prof. Daniel Czamanski**<br>**Assoc. Prof. Ron Nabbaro**<br>**Dr. Pnina Plaut**<br>**Assoc Prof. Rachel Sebba** |
| **09:45-10:30**<br>Segoe Build.<br># 240 | Co supervisors of thesis from other Technion's faculties * | **Dr. Yair Lifshitz-** Center for Work Safety and Human Eng.<br>**Prof. Joseph Miltz-** Biotechnology and Food Engineering<br>**Prof. Menachem P. Weiss-** Faculty of Mechanical Engineering |
| **10:30-11:15**<br>Segoe Build.<br># 240 | Meeting with adjunct lecturers* | **Reuven Givati-**'Industrial design studio'<br>**David de Vreis-**'Legal aspects in ID'<br>**David Goss-** 'History & Theory ID'<br>**Dr. Yaacov Greenspan-** 'Human factors in ID' |
| **11:15-12:15**<br>Segoe Build.<br># 240 | Presentation of projects by students** | **6 students** will present their projects (5 minutes presentation time per student) followed by a short (5 min) discussion by the other students.<br>**T. Abramovich; Y. Bashan-Hacham; Y. Marom; O. Shadmi; I. Shalev; O. Shapir** |
| **12:15-13:15**<br>Segoe Build. #<br>240 | Meeting with students* ** | **8 students** from all years of the study program.<br>**S. Bauman; N. Hassidov; N. Helevich; N. Meiraz; O. Shadmi; T. Suraski; O.Yarden; A. Zik** |
| **13:15-14:20**<br>Segoe Build. #<br>600 | **Lunch** - At seminar room | Committee members with **graduates** of the program for an informal discussion over lunch<br>**T. Abramovich; Y. Bashan- Hacham; A. Lowy; S. Reisman ; I. Shalev; O. Shapir** |
| **14:30-15:00**<br>Segoe Build. #<br>240 | Closed-door working meeting of the evaluation committee | |
| **15:00-15:30**<br>Segoe Build. #<br>240 | **Summation meeting** with heads of the institution and of the department | **Prof Yitzhak Apeloig -** President<br>**Prof. Paul Feigin-** Senior Vice President<br>**Prof. Moshe Sheintuch-** Deputy Senior Vice President<br>**Prof. Moshe Shpitalni-** Dean of Graduate School<br>**Prof. Yerach Doytsher** - Faculty Dean<br>**Prof. Naomi Carmon** -Associate Dean for Graduate school and Research<br>**Dr. Noemi Bitterman-** Head, Industrial Design |

* The heads of the institution and academic unit will not attend these meetings.
** The visit will be conducted in English with the exception of students who may speak in Hebrew and anyone else who feels unable to converse in English.