



**Committee for the Evaluation of Electrical and Communication System
Engineering Study Programs**

**The Technion—Israel Institute of Technology
Programs in Electrical and Electronic Engineering
Evaluation Report**

November 2016

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Chapter 1: Background

The Council for Higher Education (CHE) decided to evaluate study programs in the field of Electrical and Communication System Engineering during the academic year of 2016.

Following the decision of the CHE, the Minister of Education, who serves ex officio as Chairperson of the CHE, appointed a Committee consisting of:

- ***Prof. Alan Oppenheim***- Department of Electrical Engineering and Computer Science – MIT, USA. Committee Chair.
- ***Prof. Susan Conry*** –Wallace H. Coulter School of Engineering Electrical & Computer Engineering - Clarkson University, USA.
- ***Prof. Roch Guerin***- Department Chair and Professor of Computer Science & Engineering Department- Washington University in St. Louis, USA.
- ***Prof. Ehud Heyman***- School of Electrical Engineering - Department of Physical Electronics- Tel Aviv University, Israel.
- ***Prof. Eby G. Friedman***-Electrical and Computer Engineering, Department of Electrical and Computer Engineering- University of Rochester, USA.
- ***Prof. Mathukumalli Vidyasagar*** - Chair in Systems Biology Science Erik Jonsson School of Engineering & Computer Science - The University of Texas at Dallas, USA.
- ***Dr. Orly Yadid-Pecht*** *- iCORE/ATIF Strategic Chair in Integrated Sensors/Intelligent Systems, Professor and Lab Director - University of Calgary, Canada
- ***Prof. Dr.-Ing. Walter Kellermann***- Chair of Multimedia Communications and Signal Processing- University Erlangen-Nuremberg, Germany.

Ms. Daniella Sandler and Ms. Inbal Haskell-Gordon served as the Coordinators of the Committee on behalf of the CHE

Within the framework of its activity, the Committee was requested to:¹

1. Examine the self-evaluation reports, submitted by the institutions that provide study programs in Electrical and Communication System Engineering, and to conduct on-site visits at those institutions.
2. Submit to the CHE an individual report on each of the evaluated academic units and study programs, including the Committee's findings and recommendations.
3. Submit to the CHE a general report regarding the examined field of study within the Israeli system of higher education including recommendations for standards in the evaluated field of study.

The entire process was conducted in accordance with the CHE's Guidelines for Self-Evaluation (of September 2013).

¹ The Committee's letter of appointment is attached as **Appendix 1**.
*Dr. Yadid-Pecht did not join the visit or participate in writing this report.

Chapter 2: Committee Procedures

The Committee held its first meeting on January 6, 2016, during which it discussed fundamental issues concerning higher education in Israel, the quality assessment activity, as well as Electrical and Communication System Engineering Study programs in Israel.

In January 2016, the Committee held its visits of evaluation to 12 programs: Tel-Aviv University, the Technion, Bar-Ilan University, Ben-Gurion University, Shamoon College of Engineering, Ruppin Academic Center, Azrieli - College of Engineering Jerusalem, Lev Academic center, Ort Barude College, Holon Institute of Technology, Ariel University and Afeka College of Engineering. During the visits, the Committee met with various stakeholders at the institutions, including management, faculty, staff, and students.

This report deals with the programs of Electrical and Electronic Engineering Administration at the Technion—Israel Institute of Technology. The Committee's visit to the University took place on January 13, 2016.

The schedule of the visit is attached as **Appendix 2**.

The Committee thanks the management of the Technion—Israel Institute of Technology and the Department Electrical and Electronic Engineering for their self-evaluation report and for their hospitality towards the committee during its visit at the institution.

Chapter 3: Evaluation of Electrical and Electronic Engineering Study Programs at Technion (Israel Institute of Technology)

This Report relates to the situation current at the time of the visit to the institution, and does not take account of any subsequent changes. The Report records the conclusions reached by the Evaluation Committee based on the documentation provided by the institution, information gained through interviews, discussion and observation as well as other information available to the Committee.

1. Executive Summary

The Electrical Engineering Department at the Technion continues to be among the leading such departments not just in Israel but around the world. Some of the recommendations made during the previous evaluation have been addressed, but others not. Out of the several recommendations from this committee, the most essential are: to put in place a robust IP policy, which protects the interests of the Technion faculty; to reduce further the student to faculty ratio, which continues to be very high despite a reduction during the past decade; and to take more rapid steps towards becoming a truly international department.

2. Background

Technion opened its doors in 1924. In 1934 the Faculty of Industrial Technology was established. A few years later, the Faculties of Electrical Engineering, Mechanical Engineering and Chemical Engineering emerged from this Faculty.

The Electrical Engineering Department offers Bachelor's, Master's (both with and without a thesis) and Ph.D. degrees. During each of the past five years, the Electrical Engineering Department typically produced between 250 and 300 B.Sc. graduates, around 50 graduates of the Master's program with thesis, around 10 graduates of the Master's program without thesis, and an average of 16 Ph.D. graduates. The number of Ph.D. students fluctuated substantially from one year to the next, but this is a common phenomenon.

The Electrical Engineering Department is the largest academic unit in the Technion, with more than 1,700 undergraduate students, 430 graduate students, and 47 senior faculty members. In addition to the Electrical Engineering track, which is considered to be the main track of the department, there are also tracks in Computer Engineering (offered jointly with the Computer Science Department) and in Computer and Software Engineering.

3. Mission and Goals

Observations and findings

As stated in the Technion's self-evaluation report, the mission and goals of the institution are as follows:

“In operation since 1924, the Technion is the oldest university in Israel. Since its founding, the institute has educated three generations of men and women who have played a key role in laying the country’s infrastructure and establishing its crucial defense and high-tech industries. In the new millennium, Technion’s role at the forefront of the global network of science and technology has never been more vital.

The university offers degrees in science and engineering, and related fields such as architecture, medicine, industrial management and education in an intellectually invigorating environment. Great emphasis is also placed on its humanities and social science programs, the incorporation of which take on ever-increasing importance in today’s multi-faceted workplace. But Technion’s goals go beyond providing a well-rounded technical education. At the institute, scientific instruction is interwoven with professional ethics, producing leaders sensitive to social and environmental issues.

The dissemination of knowledge does not end in the classroom. The Technion actively publishes its discoveries in journals and popular manuscripts, and aims to spark scientific and technological interest among youth through popular lectures and programs. Technion laboratories are also dedicated to enhancing

the country's economy – they offer novel solutions, research facilities, and world-class expertise.

As a whole, the Technion is committed to its role as the country's top facility for science and technology, a role that is necessary for the future of Israel and to all of humanity."

4. Organizational Structure

Observations and findings

In the Technion, individual departments such as Electrical Engineering do not have a "parent unit"; rather, they interact directly with the administration headed by the President (Prof. Peretz Lavie) and various Executive Vice Presidents. The Department is headed by a Dean (Prof. Ariel Orda) assisted by various Vice-Deans. The Faculty Council consists of all faculty members. In short, the organizational structure is relatively standard. The President of the Technion mentioned to the committee that he had attempted to combine the Electrical Engineering and Computer Science departments. However, due to faculty resistance, the plan had to be dropped. The committee is of the view that, even if a full merger could not be achieved for whatever reasons, close interaction between the two departments is highly desirable.

5. Study Programs

Observations and findings

As mentioned in the *Background* Section, the Electrical Engineering Department offers three tracks, namely: Electrical Engineering, Computer Engineering (offered jointly with the Computer Science Department) and Computer and Software Engineering. The previous review of the department carried out in 2007 mentioned that enrolment in the latter two tracks was declining. However, the latest information was not provided in the Self-Evaluation Report.

The President of the Technion mentioned to the committee that he had attempted to combine the Electrical Engineering and Computer Science departments. However, due to faculty resistance, the plan had to be dropped. The committee is of the view that, even if a full merger could not be achieved for whatever reasons, close interaction between the two departments is highly desirable.

The department offers Bachelor's, Master's (with and without thesis), and Ph.D. programs. As mentioned elsewhere, the undergraduate program with 1,700 students, and roughly 250 to 300 graduating students each year, is the largest unit in the Technion. The number of graduate students is about 430, and the number of Ph.D. students has exceeded 100 recently. Out of these 100 Ph.D. students, about 40 are in the "direct to Ph.D." track. There are plans to increase the number of graduate students to 800, and within that, to increase the number of Ph.D. students to an average of four per faculty member, i.e., about 200 total. In addition, the department is focusing on adding several post-doctoral researchers. Their number has increased from three in 2008 to 25 at the time of the visit, of whom 17 were from abroad. The Dean mentioned that they attempt to nurture post-doctoral fellows as future faculty members.

Students are allowed to repeat a course in order to learn the material better (and in the process, to improve their GPA). In the case of a repeated course, the second grade "over-writes" the first. Each student is allowed to take one course per semester on a pass-fail basis. The student to faculty ratio is very high, about 36, and typical sizes of undergraduate courses are between 90 and 100. Consequently, it is difficult for faculty members to pay individual attention to students at the undergraduate level. The problem of large class sizes is exacerbated by the fact that students are permitted to repeat courses. On the other hand, no faculty member is exempted from undergraduate

teaching. Moreover, there are teaching assistants, who appear to be motivated to teach (and not merely to earn extra money). Teaching by Ph.D. students is not compulsory, as it is in other departments at the Technion, such as Mathematics. (This can perhaps be explained by the larger number of doctoral students in EE.)

Recommendations

Desirable:

- The committee observes that the specialization area of image processing has only one basic course. For this reason, the committee suggests that the department should consider including a larger number of image processing courses as a part of the B.Sc. program. It should be noted that the evaluation committee in 2007 also recommended that a larger number of image processing courses be offered.

6. Human Resources / Faculty

Observations and findings

The faculty size of the EE Department is just below 50, of whom 5 are female. The number of faculty dipped until 2005, remained steady between 2005 and 2010, and has been increasing slowly ever since. The department has ambitious plans to increase the faculty size to 75 by 2025, which would bring down the student to faculty ratio to 24. The recruitment is mostly “targeted,” and there are no “open advertisements.” Most of the recruitment is at the level of an Assistant Professor. However, sometimes senior persons from industry join as Full Professors.

There is some mentoring of junior faculty when they join, and this was confirmed by the junior faculty who met the committee. However, this is somewhat informal and unstructured.

The Technion attempts to maintain its traditionally high standards when recruiting. The committee asked how the Dean and Search Committee handle “gen-next” issues as couples seeking academic positions (the “two-body problem”), in light of the fact that there is no other institution in Haifa that offers employment to engineering faculty. No clear-cut answer was available. The President mentioned that often working couples live half-way between Tel Aviv and Haifa.

Recommendations

Advisable:

- As part of the general recruiting effort, special attention should be paid to increasing the number of female faculty.

Desirable:

- While junior faculty receive some mentoring upon joining the department, the mentoring process appears to be somewhat *ad hoc*. The department should make the mentoring processing more systematic.
- The Dean also mentioned the anomalous situation with respect to the “Vatat” funding whereby EE students at the Bachelor's and Master's level receive substantially less funding per student than their counterparts in the sciences. The committee is not in a position either to assess the accuracy of this claim, or to make any recommendation in case the claim is true. However, the committee does note that the equitability of per-student funding formulas is a *sine qua non* if Technion is to maintain its high standing.

7. Students

Observations and findings

There are about 1,700 undergraduate students and about 430 graduate students, including about 100 Ph.D. students. The percentage of female students has increased to around 19 percent and has been flat at that level.

The faculty perceives that further increases in the number of female students would come about only through mentoring at the middle school level, and this is beyond the control of the Technion. About half of the students take at least five years to complete the “four-year” undergraduate program. Working in industry during the final several years is quite common. There are sufficient electronic resources available, so that working students do not always feel the need to attend classes. However, further probing by the committee revealed that the electronic resources available to the students are not always modern, and sometimes consist of old video recordings.

The level of fluency in English among the students of the Technion was among the best in Israeli institutions. This can be attributed to the fact that much of the course material is available in English (though most of it is also available in Hebrew).

Recommendations

Essential:

- The fact that many undergraduates work during their final years (sometimes being forced to skip classes) has both positive and negative consequences. The institute is urged to carefully consider these issues and formulate an appropriate policy.
- Often students entering the Technion are not sure what area they should pursue. Some mentoring is available, especially by senior students to junior students. The committee was of the opinion that this was a very effective form of mentoring, which should continue to be strongly encouraged.

Desirable:

- While in principle students were in favor of a “co-op” program whereby students work and study in alternate terms, such a program is not available. Moreover, some students felt that being *completely* away from studies for four full months could be detrimental. They preferred to work and study

simultaneously, with a few days of the week devoted to each. Nevertheless, it may be useful to explore the possibility of adding a “co-op” option as part of a broad assessment of how to best offer and leverage work experience to students.

8. Teaching and Learning Outcomes

Observations and findings

As mentioned above, many students work during their final years, and do not always attend classes. While some teaching aids are available, often they are not up to date, and consist of old video recordings. The committee got the impression that there is no systematic attempt to make it easy for students to pick up material from classes that they have missed. In some areas, such as nanotechnology, material is offered via the MOOC format, but this appears to be the exception and not the rule.

Recommendations

Desirable:

- The department should encourage faculty members to explore and to adopt new and novel pedagogical methods.

9. Research

Observations and findings

The Technion views itself (and in the view of the committee, is viewed externally) as one of the leading research institutions in Israel and the world. Faculty members justifiably take pride in the quality of their research, and the important role played by that research in the Israeli hi-tech industry. Research plays a very significant role in faculty career progression, with external letters of reference, and multiple layers of decision-making involved in faculty evaluation procedures. The screening of faculty is mostly carried out at the time of hiring. As a result, most faculty members are eventually

promoted to the rank of Associate Professor. The quality of the professor's teaching is also a factor in advancement. However, this appears to be on a “pass-fail” basis; in other words, faculty with teaching evaluations below a specified threshold receive assistance in becoming better.

One striking aspect of the research carried out by the faculty (which includes also the student projects carried out during the final year of undergraduate studies) is the lack of a formal methodology for recognizing the contribution of the faculty to the intellectual property (IP) created by them. There does not appear to be a simple and widely applicable template in use for IP protection. As a result, the interests of the sponsoring industry and of the students are well-protected, but the interests of the faculty members and of the Technion do not appear to be so well-protected.

Recommendations

Essential:

- As a world-class institution, Technion must strive to be more “international.” This means recruiting post-doctoral fellows and visiting professors from the USA and Europe on a priority basis.
- The institute must develop and put in place a robust intellectual property policy that would permit faculty to derive financial benefit from their inventions. This would properly motivate faculty to produce IP within the Technion infrastructure rather than outside and independent of the Technion.

10. Infrastructure

Observations and findings

The infrastructure of the EE department is excellent.

11. Self-Evaluation Process and implementation of previous recommendations

Observations and findings

The self-evaluation report was quite comprehensive and helpful to the committee in assessing the concerns of the previous review committee and the actions the Technion has taken in response to these concerns. Of the various recommendations made by the previous committee, some have been acted upon while others have not been. A summary of the salient recommendations from the previous review, and the actions taken is as follows:

- **Reduce student to faculty ratio.** At the time of the previous review, the ratio was 42 and the recommendation from the prior review was that it should be reduced. Though the student-faculty ratio has now come down to 36, it is still too high. The department plans to bring this down to 24 by 2025.

Recommendation:

Essential:

- The committee recommends that the Technion continue to take steps to reduce the student-faculty ratio further.
- **Merge the CSE stream of the EE Department with the CE stream of the CS Department.** At the time of the prior review, it was recommended that the CSE program of the EE department be merged with the CE program of the CS department. According to the President, this was attempted but firmly rebuffed by the faculty.

Desirable:

- The committee recommends that even if there is no formal merger, the ties between the Electrical Engineering Department and the Computer Science Department departments should continue to be strengthened.

- **Allowing students to retake courses without limitation.** At the time of the previous review, students were allowed to retake courses without limitation. This policy apparently continues unchanged. Students may retake a course, but not before two semesters have passed since the prior completion of the course. This time-lapse requirement serves to limit the number of times a student can realistically expect to retake a given course.
- **Several recommendations on the undergraduate curriculum, such as offering more variety, introducing some new courses etc.** A number of recommendations concerning the undergraduate curriculum were made by the previous review team, These have been addressed satisfactorily.
- **Avoid measuring graduate students solely on the basis of grades, and incorporate research-related measures.** At the time of the previous review, it was noted that graduate students were evaluated solely on the basis of the grades they had attained in courses. It was recommended that measures related to their research contributions should also be incorporated. It was not clear to the committee extent to which this recommendation has been put in place.
- **Reduce the teaching burden on teaching assistants.** The previous evaluation committee observed that the teaching assistants viewed the load they carried as very high. The teaching assistants who met with the committee did not feel over-burdened, and in fact said that teaching was optional unlike in other departments such as Mathematics.

Chapter 4: Summary of Recommendations

The review committee was quite impressed by the visit to the Technion. The department should be commended for its many strong points. For example: there is mentoring of first-year students by upper class students; many teaching assistants teach because they *want* to teach, and not for the extra money; junior faculty receive some mentoring when they join the department; *all* faculty teach undergraduate classes; and the quality of English is among the best at any Israeli university.

Clearly the Technion continues to be among the leading engineering institutions in Israel, and indeed, the world at large. This was clear from, among others, the comments from alumni, who see the quality of students and the training they receive as huge positive factors. To consolidate and maintain its high standing, the committee would like to make the following recommendations.

Essential Recommendations

- The institute must develop and put in place a robust intellectual property policy that would permit faculty to derive financial benefit from their inventions.
- The fact that many undergraduates work during their final years (sometimes being forced to skip classes) has both positive and negative consequences. The institute is urged to carefully consider these issues and formulate an appropriate policy.
- The student to teacher ratio, roughly 36 to 1 at the undergraduate level, is far too high, and is a serious source of dissatisfaction among students. Steps must be taken to reduce this further.
- As a world-class institution, Technion must strive to be more “international.” This means recruiting post-doctoral fellows and visiting professors from the USA and Europe on a priority basis.

- Often students entering the Technion are not sure what area they should pursue. Some mentoring is available, especially by senior students to junior students. The committee was of the opinion that this was a very effective form of mentoring, which should continue to be strongly encouraged.

Advisable Recommendations

- The problem of a very high student to teacher ratio is exacerbated by the fact that students are permitted to re-take a course to achieve a better grade the second time around. This practice also distorts students' GPA. Although it appears that the number of times a student can re-take a particular course is limited in practice by the requirement that a given course may not be retaken before two semesters have elapsed, the institute should decide whether this practice should be continued. The committee recommends that the practice of retaking courses be restricted to exceptional circumstances approved by the teaching committee.
- Ideally student projects should have three stakeholders: industry, students, and Technion faculty. The committee believes that faculty do not now have an adequate representation as stakeholders in these projects, and recommends that the institute should find a way to ensure that faculty become an equal partner in defining and carrying out student projects.
- The committee was pleased to note that *all* faculty are obliged to teach undergraduate courses, and that the criteria for evaluation of faculty are beginning to give some emphasis to the quality of teaching. However, the committee believes that greater emphasis is required before a proper balance is achieved between teaching and research in the evaluation process.
 - As part of the general recruiting effort, special attention should be paid to increasing the number of female faculty.

Desirable Recommendations

- While junior faculty receive some mentoring upon joining the department, the mentoring process appears to be somewhat *ad hoc*. The department

should make the mentoring process more systematic.

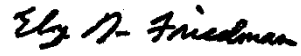
- It was mentioned that previous attempts to merge the Computer Science and Electrical Engineering departments were resisted by the faculty and thus ultimately failed. The committee is of the view that even if there is no formal merger, the ties between the two departments should continue to be strengthened.
- The department should encourage faculty members to explore and to adopt new and novel pedagogical methods. Several students mentioned that, when they are forced to miss classes (e.g., in order to work part-time), they rely on outdated video recordings to make up. Clearly this is not desirable.
- The committee suggests that the department should consider including a larger number of image processing courses as a part of the B.Sc program.
- The committee recommends that the Technion take steps to encourage greater female representation in the faculty ranks and establish a policy that accommodates situations in which family situations involving two professional partners can contribute to the Technion's mission.
- The Dean also mentioned the anomalous situation with respect to the "Vatat" funding whereby EE students at the Bachelor's and Master's level receive substantially less funding per student than their counterparts in the sciences. The committee is not in a position either to assess the accuracy of this claim, or to make any recommendation in case the claim is true. However, the committee does note that the equitability of per-student funding formulas is a *sine qua non* if Technion is to maintain its high standing.
- While in principle students were in favor of a "co-op" program whereby students work and study in alternate terms, such a program is not available. Moreover, some students felt that being *completely* away from studies for four full months could be detrimental. They preferred to work and study simultaneously, with a few days of the week devoted to each. Nevertheless, it may be useful to explore the possibility of adding a "co-op" option as part of a

broad assessment of how to best offer and leverage work experience to students.

Signed by:



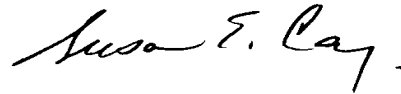
Prof. Alan Oppenheim - Chair



Prof. Eby G. Friedman



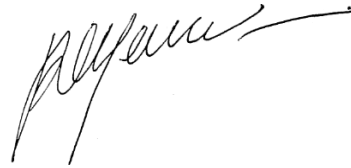
Prof. Dr.-Ing. Walter Kellermann



Prof. Susan Conry



Prof. Mathukumalli Vidyasagar



Prof. Roch Guerin



Prof. Ehud Heyman

Appendix 1: Letter of Appointment



December 2015

Prof. Alan Oppenheim
Department of Electrical Engineering and Computer Science
MIT
USA

Dear Professor,

Al

The Israeli Council for Higher Education (CHE) strives to ensure the continuing excellence and quality of Israeli higher education through a systematic evaluation process. By engaging upon this mission, the CHE seeks: 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.

As part of this important endeavor we reach out to world renowned academicians to help us meet the challenges that confront the Israeli higher education by accepting our invitation to participate in our international evaluation committees. This process establishes a structure for an ongoing consultative process around the globe on common academic dilemmas and prospects.

I therefore deeply appreciate your willingness to join us in this crucial enterprise.

It is with great pleasure that I hereby appoint you to serve as the Chair of the Council for Higher Education's Committee for the Evaluation of the study programs in **Electrical and Communication System Engineering**. In addition to yourself, the composition of the Committee will be as follows: Prof. Susan Conry, Prof. Roch Guerin, Prof. Ehud Heyman, Prof. Mathukumalli Vidyasagar, Dr. Orly Yadid-Pecht, Prof. Eby Gershon Friedman, Prof. Dr.-Ing Walter Kellermann.

Ms. Daniella Sandler and Ms. Inbal Haskell-Gordon will be the coordinators of the Committee.

Details regarding the operation of the committee and its mandate are provided in the enclosed appendix.

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

Sincerely,

Hagit Messer

Prof. Hagit Messer-Yaron
Vice Chair,
The Council for Higher Education (CHE)

Enclosures: Appendix to the Appointment Letter of Evaluation Committees

cc: Dr. Varda Ben-Shaul, Deputy Director-General for QA, CHE
Ms. Daniella Sandler, committee coordinator
Ms. Inbal Haskell-Gordon, committee coordinator

Appendix 2: Site Visit Schedule- Wednesday 13/1/16-Technion

Time & Place	Subject	Participants
9:00-9:45 Room 861	Opening session with the heads of the institution and the senior staff member appointed to deal with quality assessment	Prof. Peretz Lavie, Technion President Prof. Moshe Sidi, Senior Executive Vice President Prof. Paul Feigin, Vice President for Strategic Projects Matanyahu Englman, Executive VP & Director General Prof. Daniel Rittel, Deputy Senior Vice President Prof. Yachin Cohen, Dean of Undergraduate Studies Prof. Ben-Zion Levi, Dean of the Graduate School Prof. Ariel Orda, EE Dean Prof. Nahum Shimkin, EE Evaluation Coordinator
9:45-10:25 Room 861	Meeting with Dean of the Faculty of Electrical Engineering	Prof. Ariel Orda, Dean Prof. Nahum Shimkin
10:25-11:10 Room 861	Meeting with the academic and administrative heads of the Faculty of Electrical Engineering	Prof. Rami Atar, Vice Dean for Undergraduate Studies Prof. Idit Keidar, Vice Dean for Graduate Studies Prof. Meir Orenstein, Vice Dean for Undergrad. Students Prof. Nahum Shimkin, Evaluation Coordinator
11:10-11:20	Break	
11:20-12:15 Room 861	Meeting with academic staff	Yuval Cassuto, Assistant Professor Alex Hayat, Assistant Professor Ron Meir, Professor Shlomo Shamai (Shitz), Distinguished Professor Ayellet Tal, Professor Ronen Talmon, Assistant Professor Nir Tessler, Professor
12:15-13:00 Room 861	Meeting with PhD & MSc students / Teaching Assistants	Gal Dalal (PhD, TA) Wasim Huleihel(PhD, TA) Himanshu Shekhar (PhD) Michael Greenman (PhD, TA) Anat Lev-Ari (PhD, TA) Dani Voitsechov (PhD, lecturer) Evyatar Hemo (PhD) Shahar Stein (MSc, TA) Tzach Jaffe (MSc, TA) Barak Farbman (MSc, TA)

13:00-13:45 Room 815	Lunch	Closed-door working meeting of the committee
13.45-14.30 Room 861	Meeting with BSc students	Ahmed Abassi (CE & Math) Lev Basin (EE) Yael Bahar (EE) Ayal Ben-David (EE) Idan Haim (CSE) Aharon Malin (EE-Physics) Alisa Ogorsky (CSE) Aviv Rabonovic (EE-Physics) Noa Yechezkel (EE)
14.30-14:45 Tour	Tour of the Department, Part 1: Meyer Building	Yoram Or-Chen Prof. Nahum Shimkin
14.45-15.25 Room F383	Final Project Presentations	Presenting undergraduate students
15:25-16:10 Tour	Tour of the Department, Part 2: SAMPL LAB	Presenting graduate students Yoram Or-Chen Prof. Nahum Shimkin
16:10-16:45 Room 861	Meeting with Alumni	Aharon Aharon Ayal Bar-David Dr. Liane Lewin-Eytan David Perlmutter Naftali Sharir Gil Weiser Prof. Uri Weiser
16:45-17:15 Room 861	Meeting with adjunct lecturers	Dr. Gal Ben David Dr. Tammy Ben-Yaakov Hovav Gazit Dr. Ran Kaftory
17.15-17:30	Break	Light refreshment on the 8 th floor lobby
17:30-18:00 Room 861	Closed Door Meeting of the committee	
18:00-18.30 Room 861	Summary meeting with the heads of the institution and the dean	Prof. Moshe Sidi, Senior Executive Vice President Prof. Hagit Attiya, Executive VP for Academic Affairs Prof. Daniel Rittel, Deputy Senior Vice President Prof. Yachin Cohen, Dean of Undergraduate Studies Prof. Ben-Zion Levi, Dean of the Graduate School Prof. Ariel Orda, EE Dean Vice Deans: Profs. Atar, Keidar, Orenstein Prof. Nahum Shimkin, Evaluation Coordinator