



Committee for the Evaluation of Physics Studies

Ben-Gurion University of the Negev

The Physics Department

Evaluation Report

December 2007

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Chapter 1- Background

At its meeting on March 8, 2005 the Council for Higher Education (CHE) decided to evaluate study programs in the field of Physics during the academic year 2005-2006.

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

- ***Prof. Hanoch Gutfreund*** - The Racah Institute of Physics, The Hebrew University, Committee Chairman.
- ***Prof. Daniel Ashery*** - School of Physics and Astronomy, Tel Aviv University.
- ***Prof. Moshe Deutsch*** - Department of Physics, Bar Ilan University.
- ***Prof. James Langer*** - Department of Physics, University of California Santa Barbara, U.S.A.
- ***Prof. Stephen Lipson*** – Faculty of Physics, the Technion, Haifa.

Ms. Alisa Elon- Coordinator of the committee on behalf of the Council for Higher Education.

Within the framework of its activity, the committee was requested to:

1. Examine the self-evaluation reports, which were submitted by institutions that provide study programs in Physics, and hold on-site visits to those institutions.
2. Present the CHE with final reports for the evaluated academic units and study programs - a separate report for each institution, including the committee's findings and recommendations, together with the response of the institutions to the reports.
3. To submit to the CHE a report regarding its opinion of the examined field of study within the Israeli system of higher education. The committee will submit a separate report to the CHE in this matter.

The committee's Terms of Reference document is attached as **Appendix 1**.

The first stage of the quality assessment process consisted of self-evaluation by the institutions. This process was conducted in accordance with the CHE's Guidelines for Self-Evaluation (of October 2005) and on the basis of the committee's specific instructions, as set forth in their letter to the institutions dated December 21, 2005.

Chapter 2-Committee Procedures

The committee held its first meeting on March 26, 2006 during which it discussed fundamental issues concerning Physics study programs in Israel and its quality assessment activity.

During the period June-July 2006 the committee members received the self-evaluation reports.

In November 2006, the committee members conducted a full-day visit to each of the institutions offering study programs in the field under examination. During the visits, the committee met with the relevant officials within the organizational structure of each institution, as well as faculty and students.

This report deals with the Physics Department at the Ben-Gurion University of the Negev.

The committee's visit to Ben-Gurion University took place on November 21, 2006. 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 Ben-Gurion University and the Faculty of Physics for their self-evaluation report and for their hospitality towards the committee during its visit.

Chapter 3- Evaluation of the Physics Department at the Ben-Gurion University

The University

Ben-Gurion University of the Negev was established in 1970 based on existing institutions of higher education in the southern part of Israel. It has developed over the years to become one of the nation's major universities. Today the university has about 17,000 students in seven campuses located in Beer-Sheva, Sdeh-Boker and Eilat. There are four Faculties: Engineering, Health sciences, Humanities and Social sciences, and Natural sciences. In addition, there are several schools and institutes. The university has expanded rapidly over the last two decades establishing new research centers. One of the new efforts that will have significant impact on the Physics Department is the Center for Nanotechnology.

The Physics Department is part of the Faculty of Natural sciences. In addition to providing a full physics education for its own 250 undergraduate and over 100 graduate students, the Department provides physics courses for about 4,000 students coming from other departments in the Faculty of Natural Sciences and from other Faculties. In the year 2000, the University appointed a visiting committee to evaluate the Physics Department with emphasis on the research program. We were not shown the report of this committee. Nevertheless, we believe that such committees are important for the development of research and teaching in universities, and were pleased to note that such an evaluation has taken place at Ben-Gurion University.

The Physics Department

Today, the BGU Department of Physics has twenty-nine faculty members. It carries out research in a variety of subjects including astrophysics and cosmology, high energy physics, non-linear dynamics, lasers and atomic spectroscopy, and condensed matter and biomedical physics. The faculty has been able to obtain external research funding of approximately \$4M per year.

The most important problem facing the BGU Physics Department is that about half of the faculty members are more than 60 years old, and only four are under the age of 45. The impact on the Department of the retirement of these older members of its faculty will be enormous, putting in danger its vitality in research and its ability to provide adequate education for its own students and those from other Departments and Faculties. The teaching load carried by the faculty already is very high. The Department has developed various ways to cope with this situation, including extensive use of information technologies (contrary to the statement in section 3.3.4 of the written report). However, this strategy is barely adequate today and will be far from satisfactory in the future unless immediate steps are taken to reverse the downward trend.

In our discussion with the University management, we were informed that there is a severe financial crisis and that, as a consequence, there is a freeze on new appointments. We were told that in special cases the freeze will be removed. However, there has not yet been any decision about what will constitute a “special case” and whether the Physics Department will qualify for that status.

Planning and Faculty Development

We have the impression that the University management does not view the situation to be as grave as it appeared to us. The Physics Department at Ben-Gurion University is

already the smallest department in Israel that provides full undergraduate and graduate programs in physics and maintains a broad research program. It is extremely small in comparison to physics departments at major research universities elsewhere in the world. If no urgent measures are taken, it will be reduced by retirements from twenty-nine to only nineteen faculty members within the next three years. Such a drastic reduction will jeopardize its ability to maintain anything like its present stature.

A serious planning process is essential in a situation like this one. However, our discussions with the management and faculty led us to believe that no such process is taking place at the present time. The issue is not only the recruitment of new faculty, but also whether the Department will be able to fulfill its educational duties and maintain all of its teaching programs. It is not clear to us how the Department under present circumstances can maintain the six undergraduate programs that it offers to its students and provide basic physics courses for about 4,000 students in other Departments and Faculties. It is even less clear how the Department can accommodate the two additional curriculum tracks that are now being considered.

It is also essential for a first-rate physics department to maintain a balance between theoretical and experimental physics and between the different subtopics within this discipline. This breadth of capabilities is seriously jeopardized by the present decline in the size of the faculty. Experimental physics will be more severely affected in the present situation than theoretical, because there are no resources to support new laboratories. Physics, however, is intrinsically an experimental science. Laboratory experience is an essential component of an education in physics.

We do note some positive developments. One of these is the recent addition of Dr. Ron Folman and his group to the BGU Physics Department. Another is the new Center for Nanotechnology, which may provide some temporary positions for the Physics Department. Here, however, there seems to be another unaddressed planning issue. How will the faculty members recruited via this Center be absorbed into the Physics

Department, and will they be the people who are most needed to sustain its teaching programs?

As mentioned above, we note the extensive use of information technologies to assist in teaching core physics courses, and also the voluntary efforts of retired faculty members in the teaching programs. We applaud these initiatives but we think that, by themselves, they will not be sufficient under present circumstances.

Undergraduate Teaching Program

Although the number of faculty members in the department is relatively small, the department offers six different study programs:

1. 3 years general physics
2. 3 years physics and computers
3. 3 years physics and electro-optics
4. 4 years physics and electrical engineering, 2 B.Sc. degrees
5. 4 years physics and material science, 2 B.Sc. degrees
6. 4 years physics and computer science, 2 B.Sc. degrees

Two more tracks are being considered. The combination of these tracks, the courses given to 4000 students from outside the Department (to which the best teachers are assigned), and the small number of faculty members creates a very heavy teaching load. The number of students studying in each track was not provided and it is not clear to us whether the number of tracks affects the teaching load. If it does, it may be worth considering a reduction in the number of tracks rather than increasing it.

The level of the basic physics courses, generally described as following the Berkeley series for physics students and the Halliday and Resnik books for service courses, seems adequate. Similarly, the syllabi for electromagnetism and quantum mechanics are at a

good level. The courses in mathematics are taught by members of the Mathematics Department.

The courses in mathematics are taught by members of the Mathematics Department and the students complained about the incompatibility of these courses with the needs in physics. A "Mathematical Methods" course was added, given by physicists, and was very useful. The program lists a large variety of elective courses covering many aspects of modern physics including astronomy, atomic, nuclear and particle physics, solid and soft condensed-matter physics, plasma physics, general relativity, non-linear dynamics, and more, mostly reflecting the research interests of the faculty. However, due to limitations on the number of participating students and other constraints, only few if any of these courses are actually offered at any time. A special mandatory course exposes the students to the research carried out in the Department. The whole undergraduate program for physics majors requires 124 credit points, which is less than is required in other universities.

Because of the large number of students being taught, class sizes are large, reaching 200 students in some cases. As a result of larger classes, the faculty is under increased pressure to provide individual help to students who are having problems – a situation that amounts to an effective increase in the actual teaching load. Faculty members are making great efforts to be available to the students. They have devised a very sophisticated information-technology system, working through the internet, in which students are given exercises and solutions, and are able to discuss them online with their instructors. However, the exercises are checked and graded only randomly. The studies committee monitors the web site and makes sure that the exercises are good, responses are given, etc.. Beyond that, both senior and junior faculty (mostly Ph.D. students) have an "open door" policy, and students can approach them with problems at any time. The students with whom we spoke all praised this system and were very happy about their relations with the faculty members. Nevertheless, this invisible teaching load must detract from the faculty's ability to maintain high standards in carrying out its other responsibilities.

The number of physics students starting each year has been about 100 in recent years, with a total of about 250 in all the B.Sc. programs at any given time. Of these, about 20 graduate each year. The department lists a drop-out rate of about 35%. However, the stated graduation rates make it seem that there is additional movement of students out of the physics programs. We were given no explanation for this data. The acceptance level into B.Sc. programs is set fairly low on the assumption that students with nominally poor scores at entrance eventually may be successful. Some first year courses are used as filters to select those students who will be able to continue in physics studies.

Undergraduate Teaching Laboratories

Generally, the laboratory courses are associated with the year: 1st, 2nd and 3rd year. The experiments are conducted in “cook-book” style and designed mainly to teach experimental techniques and to demonstrate the relevant physics concepts. There is very little room for creativity and initiative on the part of the students. Students work in pairs. The physical conditions, i.e. the rooms, furniture, and space, are good. A faculty member is responsible for each laboratory, monitoring the academic level of the teaching, which is done by graduate students. He/she also oversees the development of new experiments. There is adequate technical support. The equipment is in good condition and is well maintained. Some of it was built in-house.

1st year laboratory

This laboratory annually serves about 600 students coming from all the study programs served by the physics department. It consists of 20 relatively simple experiments in mechanics, electricity and optics. In most cases, the experiments are performed before a lecture on the subject has been given. The duration of each experiment is about three hours excluding preparation and writing a report. Each instructor supervises 12 students doing the same experiment (in 6 stations).

2nd year laboratory

This laboratory annually serves about 60 students coming from the physics study programs. The experiments are related to more advanced topics in physical optics, microwaves, electronics, atomic spectroscopy, etc.. The experiments last longer, extending for two or three weeks; eight experiments are performed in two semesters. Each instructor (mostly PhD students) is responsible for two experiments.

3rd year laboratory

This laboratory annually serves about 60 students coming from the physics study programs. The experiments cover subjects in solid state physics, low-temperature physics and superconductors, nuclear physics, Mössbauer effect, STM, etc.. Apart from a single complex experiment (involving UHV, electron diffraction etc.), most experiments are simple compared with 3rd year laboratories in some other Israeli universities. There is some room for small variations in the experiments. Students prepare samples and even build a ND:YAG laser. Two experiments are performed each semester. Most experiments are located in a dedicated room, and one instructor is responsible for two or three experiments. Many of the experiments are in subjects that are not covered in regular lectures.

The Graduate Program

Students who graduate with sufficiently high grades are accepted to the M.Sc. program, which requires courses totaling 24 semester-hours plus, ordinarily, a thesis. This curriculum includes core courses in advanced quantum and statistical mechanics. The rest

of the courses are from the research area in which the student works for his/her thesis. There is also a joint physics-electrical engineering M.Sc. track in which the thesis is optional and can be replaced by 12 additional semester hours of course work. Students are expected to complete an M.Sc. study program within four or five semesters. Thesis approval by referees and a final exam are part of the procedure for obtaining the MSc. degree.

The department is trying to provide its graduate students with a variety of advanced courses. However, many of these courses often are cancelled because they require a minimum attendance of five students. Graduate students complained that they are not getting a sufficiently broad education. Some consideration should be given to the minimum attendance rule so as to find ways to provide a larger variety of advanced courses.

Students completing the M.Sc. degree with sufficiently high grades are accepted into the Ph.D. program, which requires courses totaling 6-10 semester-hours as determined by the thesis supervisor. There is an option for students graduating with high grades at the B.Sc. level to work directly towards the PhD degree without entering the M.Sc. program. The normal completion time for the Ph.D. is four years for students having the M.Sc. degree and five years for the direct program. Steps on the way to the Ph.D. include acceptance of a research proposal, passing an examination, and approval of the final thesis by referees and the department committee.

As an important part of their regular activities, the graduate students conduct a research seminar without the presence of faculty members.

Graduate students receive financial support from three sources:

1. Departmental fellowships
2. Additional fellowships from research grants
3. Salary for working as teaching assistants

About half of the graduate students receive some support at levels depending on course grades. A student with high grades who is also teaching may have a monthly income of about 6,000 - 7,000 NIS.

Relations between Research and Teaching

The current research activities of the Department members cover most areas of physics. This diversity is reflected in the courses at all levels. At the undergraduate level, lecturers in advanced courses such as quantum mechanics and electromagnetism are theoretical physicists well versed in the conceptual background and mathematical techniques. The laboratories are designed and supervised by experimental physicists. There are numerous courses (elective and compulsory) directly related to modern research topics such as cosmology, particle and nuclear physics, condensed-matter physics, etc. that can be given at an adequate level only by active scientists. The entire graduate program is focused on research by students in subjects that are in their supervisors' areas of expertise.

Our committee believes that the heavy teaching load is taking its toll on the research carried out by the BGU Physics faculty. We could not explore this issue in detail, however, because we were instructed to examine only the quality of the teaching programs and were allowed time only for that purpose. The extra teaching load is particularly difficult for experimentalists who have, as an additional burden, no technical support for running their laboratories. They and their students must do the technical work themselves, further slowing their progress toward publishable research and academic degrees.

To give one example, we mention our discussion with Professor Ilana Bar, who runs a laboratory in laser physics. There are ten M.Sc. and Ph.D. students working in that laboratory. They have no research technician, because the University does not provide technicians for research projects. Thus, Professor Bar and her students do their own technical work. Professor Bar has a heavy teaching load; she has been teaching two courses every semester and is now beginning a new course in Quantum Optics. How

does this situation affect the quality of the research done in that laboratory and the quality of training of the M.Sc. and Ph.D. students? These are questions that our committee could not explore in general. It seems to us, however, that the case of Professor Bar is not unique.

Student-Faculty Relations

One of the possible costs of a heavy teaching load is that the faculty has less time to help students who have problems. While our committee was exposed only to students in the physics programs and not in the service courses, we had the clear impression that the faculty members are always available to help students and do their best to make the teaching effective. Both undergraduate and graduate students described very pleasant relations between faculty and students. Students also praised the attitude of the administrative staff.

Summary

We begin on the positive side. The Physics department of Ben Gurion University should be applauded for successfully carrying out research and teaching in most of the major fields of physics. This is the smallest department in Israeli universities that maintains such a broad teaching and research program. Both senior and junior faculty members are making great efforts to respond to their students' needs. It was gratifying to hear about the very good relations between students and faculty and the university in general. We note the detailed information that is kept by the department on the whereabouts of its graduates. We were also pleased to hear that the committee in charge of selection of candidates to the graduate program at the Weizmann Institute has found that in recent years the candidates from BGU are better prepared for graduate studies than in the past.

However, there are major concerns about the future which endanger these achievements. This Department, already small, is going to shrink dramatically within a few years due to retirements. It is not clear to us what steps are being taken by the University and by the

Department to ensure that, in the future, this Department will be able to maintain its present quality and the scope of its research and teaching programs. We can already sense a deterioration in the quality of the physics education provided to the BGU students. We have pointed out that the B.Sc. graduation rate is small – annually about 20 graduates out of a total enrollment of about 250 students. This is the smallest fraction we have seen at any Israeli institution. The reasons for this situation are not clear to us; and we urge the Department to explore this issue. The lack of technical support in the research laboratories imposes an additional load on the faculty and the Ph.D. students, and it has a (indirect) negative effect on the teaching programs. There may be some steps that can improve the teaching efficiency, such as increased use of information technology and removing overlapping subjects from the syllabi of some courses. Such steps may help, but they cannot compensate for the drastic reduction expected in the number of faculty members in the near future.

Our committee is aware of the budgetary difficulties that the administration of BGU is facing. This is a situation which calls for hard decisions. If the university will not be able to maintain approximately the present size of its Physics faculty and address the issues raised in our report, it will have to reduce the scope of topics covered by its research program, and this will drastically affect the scope and quality of its teaching programs. We hope that BGU and the Physics Department will find ways to avoid this situation.

Signed By:

A handwritten signature in black ink, appearing to read 'H. Gutfreund', written over a horizontal line.

Prof. Hanoch Gutfreund
Chairman

On behalf of the committee

APPENDICES

APPENDIX 1

Terms of Reference of the Committee



18 October 2006

To:

Prof. Hanoach Gutfreund - The Racah Institute of Physics, the Hebrew University
Prof. Daniel Ashery - School of Physics and Astronomy, Tel Aviv University
Prof. Moshe Deutsch - Department of Physics, Bar Ilan University
Prof. James Langer - Department of Physics, University of California Santa Barbara, U.S.A.
Prof. Stephen Lipson - Faculty of Physics, the Technion, Haifa
Esteemed Gentlemen,

I hereby appoint you as members of the Council for Higher Education's (CHE) Committee for the Evaluation of Physics Studies within institutions of higher education in Israel.

You are kindly requested to operate in accordance with the Appendix to the Terms of Reference of Evaluation Committees (study-programs), which is attached to this Terms of Reference document.

The Committee is requested within the framework of its activity to:

1. Examine the self-evaluation reports which shall be submitted by the institutions that provide study-programs in Physics, and hold on-site visits to those institutions.
2. Present the CHE- by January 2007- with final reports regarding the evaluated academic units and study-programs- a separate report for each institution including the Committee's findings and recommendations, together with the institutions' responses to the reports.

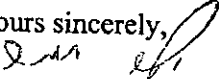
Within the framework of the final reports, the Committee is requested to refer to the following topics, among others, in relation to each of the study-programs:

1. The goals and aims of the evaluated academic unit and study-programs.
2. The study-program and its standard.
3. The academic staff.
4. The students.
5. The organizational structure — both academic and administrative - of the academic unit and study-program.
6. The broad organizational structure (school/faculty) in which the academic unit and the study-program operate.
7. Physical and administrative infrastructure available to the study-program.
8. Internal mechanisms for quality assessment
9. Conclusions of the academic unit and the study-program.
10. Other topics to be decided upon by the Evaluation Committee.

In addition to its final reports concerning each study program under examination, the committee shall submit to the CHE the following documents:

1. A report regarding Physics Studies within the Israeli system of higher education.
2. A proposal concerning standards for Physics Studies.

Professor Hanoeh Gutfreund shall preside over the Committee as Chairman.
Ms. Einav Broitman shall coordinate the Committee's activities.

Yours sincerely,


Yuli Tamir
Minister of Education
Chairperson of the Council for Higher Education

cc: Ms. Riki Mendelzvaig, Secretary of the Council for Higher Education
Ms. Michal Neumann, in charge of the Quality Assessment Unit
Ms. Einav Broitman, coordinator of the committee

Enclosure:

Appendix to the Terms of Reference of Evaluation Committees (study-programs).

Appendix to the Terms of Reference of 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 once in six years and institutions once in eight years. The quality assessment system came into effect in the academic year of 2004-2005.

The 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 this subject and to develop internal mechanisms for the evaluation of academic quality 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 activity. The evaluation committee is requested not to make comparisons between the institutions.

2. The Evaluation Committee

- 2.1 The CHE shall appoint a Committee to carry out quality assessment of the study-programs.
- 2.2 A senior academic figure in the examined field shall be appointed as Chairman.
- 2.3 The Committee shall include 3 to 5 senior academic figures in the field from leading institutions in Israel and abroad. In exceptional cases, and in cooperation with the committee chairman, an authoritative figure who is not on the academic staff of an institution of higher education may be appointed as a committee member.
- 2.4 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 work of the Evaluation Committee

- 3.1 The Committee shall hold meetings, as needed, before visiting the institution, in order to evaluate the material received.
- 3.2 The committee shall visit the institution and the academic unit being evaluated 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-study 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.

3.3 In a meeting at the beginning of the visit, the committee will meet with the heads of the institution (president/rector, dean), the head 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.

3.4 The duration of the visits will be coordinated with the Chairman of the Committee according to the issue, and in any event will not be less than one day.

3.5 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. The institution's and the academic unit's response will not result in changes to the content of the Committee's report, unless they point out errors in the data or typographical errors in the Committee's report. In such cases, the committee will be able to make the required corrections in its final report.

4. The Evaluation Committee's Report

4.1 The final report of the evaluation committee shall address every institution separately.

4.2 The final report shall include recommendations on the subjects listed in the guidelines for self-evaluation, and in accordance with the Committee's Terms of Reference.

4.3 The recommendations can be classed as one of the five following alternatives:

4.3.1 *Congratulatory remarks and minimal changes recommended, if any.*

4.3.2 *Desirable changes recommended* at the institution's convenience and follow-up in the next cycle of evaluation.

4.3.3 *Important/needed changes requested for ensuring appropriate academic quality* within a reasonable time, in coordination with the institution (1-3 years).

4.3.4 *Essential and urgent changes required, on which continued authorization will be contingent* (immediately or up to one year).

4.3.5 *A combination of any of the above.*

4.4 The committee's report shall include the following:

4.4.1 **Part A — General background and an executive summary:**

4.4.1.1 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.

4.4.1.2 An executive summary which will include a description of the strengths and weaknesses of the academic unit and program being evaluated, according to the subjects listed in the body of the report and a list of recommendations for action.

4.4.2 **Part B — In depth description of subjects examined:**

4.4.2.1 This part will be composed according to the topics examined by the evaluation committee, in accordance with the committee's Terms of Reference and the report submitted by the institution, and at the discretion of the committee.

4.4.2.2 For each topic examined - the report will present a summary of the findings, the relevant information and an analysis thereof, and conclusions and recommended actions.

4.4.3 **Part C — Summary and recommendations:**

- 4.4.3.1 A short summary of every one of the topics described in detail in Part B, including the committee's recommendations.
- 4.4.3.2 Comprehensive conclusion/s and recommendation/s regarding the evaluated academic unit and the study-programs.
- 4.4.4 **Part D- Appendices:**
The appendices shall contain the committee's Terms of Reference, relevant information about the institution and the evaluated academic unit, the schedule of the on-site visit.
- 4.5 The final report will be delivered to the institution, with the deadline for its and the academic unit's response noted.
- 4.6 The Committee's final report together with the response of the institution and the academic unit will be brought before the CHE.
- 4.7 The CHE will discuss these documents and formulate its decisions within (approximately) a year from the time the guidelines for self-evaluation were sent to the institutions.

APPENDIX 2

The schedule of the visit



BGU Evaluation Committee – November 21, 2006
Physics Seminar's room -002 building 29

Time	Meeting with	Participants
09:00-09:30	Opening session with heads of the institution, the senior staff appointed to deal with the quality assessment and the heads of the academic unit	Prof. Jimmy Weinblatt Prof. Yael Edan Prof. Abraham Parola Prof. Yigal Horowitz
09:30-11:30	Meeting with the school's academic and administrative leadership	Prof. Abraham Parola Prof. Baruch Horowitz Prof. Yigal Horowitz Prof. Michael Gedalin Prof. Yigal Meir Prof. Reuben Thieberger
11:30-13:00	Tour of Teaching laboratories , meeting with Teaching Assistants (labs' instructors)	Prof. Baruch Horowitz Prof. Yigal Horowitz Prof. Michael Gedalin Prof. Doron Cohen Prof. Reuben Thieberger
13:00-14:00	Lunch	Committee members
13:45-14:45	Meeting with senior academic staff	Prof. Aharon Davidson Dr. Oleg Krichevsky Prof. Ram Brustein Prof. Reuben Thieberger
14:45-15:45	Meeting with graduate students (MA and PhD) and Teaching Assistants	Chuchem Maya, Gideon Carmon, Stotland Alexander, Shusterman Roman
15:45-16:45	Meeting with undergraduates	Ychudai Hadar, Ezersky Irina, Gal Matan, Klecorin Yaakov, Benjamin Noa, Feldesh Ran
16:45-17:30	Summary meeting with the head of the institution, the person in charge of quality in the institution, and heads of the academic unit	Prof. Jimmy Weinblatt Prof. Yael Edan Prof. Abraham Parola Prof. Yigal Horowitz
17:30-18:00	Closed meeting	

