



Committee for the Evaluation of Material Engineering Study Programs

Azrieli College of Engineering, Jerusalem

Department of Advanced Material Engineering

Evaluation Report

October 2014

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Chapter 1- Background

The Council for Higher Education (CHE) decided to evaluate the study programs in the field of Material Engineering during the academic year of 2014.

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. Enrique J. Lavernia – College of Engineering, University of California, Davis, California, USA: Committee Chair
- Prof. David N. Seidman – Materials Science and Engineering, Northwestern University, Evanston, Illinois USA
- Prof. Dr. Reiner Kirchheim – Institute für Materialphysik, Gottingen University, Germany
- Prof. Ronald Gibala – Materials Science and Engineering, University of Michigan, Michigan, USA
- Prof. Doron Aurbach – Department of Chemistry, Bar-Ilan University, Israel

Ms. Daniella Sandler- Coordinator of the Committee on behalf of the CHE.

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

1. Examine the self-evaluation reports, submitted by the institutions that provide study programs in Material 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 July 2012.

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

Chapter 2-Committee Procedures

The Committee held its first meetings on 25/4/2014, during which it discussed fundamental issues concerning higher education in Israel, the quality assessment activity, as well as Material Engineering Study programs in Israel.

In 27/4/2014- 1/5/2014, the Committee held its visits of evaluation, and visited the Azrieli College of Engineering, the Technion and Ben Gurion University. During the visits, the Committee met with various stakeholders at the institutions, including management, faculty, staff, and students.

This report deals with the Department of Material Engineering at Azrieli College of Engineering. The Committee's visit to the University took place on 27/ 4/2014.

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

The Committee thanks the management of Azrieli College of Engineering and the Department of Material Engineering for their self-evaluation report and for their hospitality towards the committee during its visit at the institution.

Chapter 3: Evaluation of advanced Material Engineering Study Program at Azrieli College of engineering Jerusalem.

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

Since its foundation in 1999 The Azrieli - College of Engineering, Jerusalem (JCE) has matured into a high caliber academic institution that graduates engineers to meet the needs of a burgeoning high-tech industry in Jerusalem. JCE is strategically positioned, both geographically and intellectually, to meet effectively the needs of high technology industries in Israel. JCE emphasizes teaching as its core mission, and encourages research as a strategic opportunity for intellectual growth of both faculty and students. The Advanced Materials Engineering curriculum exposes students to state-of-the-art knowledge in technology and includes required final projects with notable industries (e.g., Teva, Intel, and AMX) that provide unique experiences for students who may want to pursue careers in either industry or higher education.

JCE's current enrollment is approximately 1,600 students, with plans to enroll 3,500 students by 2020. At present, approximately 75% of JCE students come from the Jerusalem region and approximately 20% from disadvantaged backgrounds. JCE's long term strategy to attract students from diverse populations, including students living in settlements, students from low income families and students from Arab communities (Christian and Muslim) is both socially commendable as well as economically sensible for the country of Israel. Israel's high technology industry continues to grow at an admirable rate, and educational institutions, such as JCE, need to be prepared to provide the human talent required to meet future needs.

The recommendations made in this report encompass both short term (0-1 year) as well as long term (1-3 yrs.) time periods. Recommendations are made in all areas of academic performance, including: mission statement, faculty, study programs, infrastructure, research and self-evaluation process. In most cases these recommendations reflect JCE's young age as an academic institution and are intended to encourage the faculty, staff and students to continue to advance JCE in stature and effectiveness. Additionally, the Evaluation Committee would like to encourage JCE's administration and faculty to work aggressively to enhance JCE's reputation at the local, national and international levels. The establishments of a development infrastructure to better engage alumni and industry is an excellent first step. It is the opinion of the Evaluation Committee that JCE occupies a unique position amongst Israel's educational institutions with dedicated faculty, engaged students, passionate alumni and strong industry support.

2. Organizational aspects and infrastructure

Observation and findings:

The JCE seems to be well organized in terms of teaching facilities, student laboratories and access to networking, electronic communication, and information resources. The institute seems to have the appropriate administrative staff for its current operation. The JCE recruits suitable teaching assistants for operating the students' laboratories at a high level. The maintenance level of the laboratories and related equipment is high. Also, the JCE seems to have adequate office manpower for maintaining good services for the students.

The construction of the new facilities that progresses at the expected and planned rate will enable the JCE to increase its capacity and meet well all its growth and development programs for the next 6 years. In general, the institute has enough unused space and land for further expanding and elaboration of new facilities. It seems that the JCE has all the means it needs in terms of organization, proper management, and infrastructure.

Recommendations:

Short term/intermediate (~ within the next 2 years)

1. To proceed as smoothly as possible with construction of the new facilities, which are supposed to be completed within one year

Until the next cycle of evaluation:

1. Upon success with the growth and expanding plans of the institute for the next two years, going further with expanding the JCE facilities, as suggested by the long term plans.

3. Mission and Goals

Observation and Findings:

The Azrieli - College of Engineering, Jerusalem (JCE) was established in 1999 to augment Jerusalem's economy and academic climate via a program of study to train engineers to meet the needs of a burgeoning high-tech industry in Jerusalem. The Department of Advanced Materials Engineering at Azrieli emphasizes microelectronics, with strong training in chemistry, which helps students to be well prepared for careers at high technology industries, such as Intel and AVX, for example. The Evaluation Committee found the administration excellent and clear in its academic objectives and goals, the faculty, dedicated and competent, the laboratory staff knowledgeable and

stable, the students' energized and happy, industry pleased with the outcome, and alumni who are both successful and engaged with JCE.

JCE's long term goal to attract students from diverse populations, including students living in settlements, students from low income families and students from Arab communities is both socially commendable as well as economically sensible for the country of Israel. Israel's high technology industry continues to grow at an admirable rate, and educational institutions, such as JCE, need to be prepared to provide the human talent required to meet future needs.

The mission of JCE is stated as:

"Training first-rate materials engineers with excellent familiarity of the fields of classic materials, as well as microelectronic materials, turning out top-quality, well prepared candidates for the Israeli high-tech industry, especially in Jerusalem, and for Graduate studies in engineering and the sciences."

It is the opinion of the Evaluation Committee, that at least based on the fact that 75% of graduates are employed as engineers, and 30% of graduates have gone on to graduate programs, that the department is successfully accomplishing its mission. Moreover, comments made during meetings of the Evaluation Committee with adjunct faculty, JCE alumni and students all confirm that JCE is intimately engaged with a variety of local industries, which benefits students and faculty alike. However, it is also important to note that the Evaluation Committee sensed some confusion around the use of the word "classic materials" in its mission statement, given that at present the curriculum emphasizes strongly microelectronic materials and chemistry. For example, some students expressed a desire to receive more training in traditional areas, such as physical metallurgy, for example. Specific recommendations related to the teaching curriculum are provided in a later section of this report.

Following the visit of the Evaluation Committee to JCE, and after deliberations and review of all provided information, the following recommendations are made.

Recommendations:

Short Term (0-1 year):

1. Revise the mission statement to reflect accurately areas of study at JCE.
2. Establish a methodology to vet the mission statement with all relevant constituencies: faculty, students, alumni, and industry.

Long Term (1-3 years):

1. Regularly revise mission statement as JCE matures as an institution and additional

students enroll.

2. Implement regular reviews of the mission statement following a well-defined methodology and involving faculty, students, alumni, and industry.

4. Study Programs

Observation and findings:

The courses taught to the students reflect the mission of the department in providing a general and fundamental scientific basis of materials engineering within the first two years and specializing in the areas of classical materials and materials used in microelectronics industry. For the fundamental part of it there is an appropriate balance of mathematics, physics and chemistry during the first part of the undergraduate education. Within this period it is helpful and important for the students to attend the course on Introduction to Material Engineering, in order to become acquainted with many topics of their field. With respect to the feedback the Evaluation Committee received from the students it is desirable to have two introductory courses for the students to become even more familiar with the core field of their study.

The study program within the third and fourth years still contains courses on fundamental subjects of materials engineering, such as solid-state physics, mass transport etc. Additionally courses specializing in microelectronics and classical materials are mandatory.

Lab courses are offered for a large variety of subjects. These courses provide appropriate and modern equipment to train students in the corresponding areas; again with an emphasis on microelectronics.

The final project required at the end of the fourth year is conducted either in industry or in a different academic institution. This is considered by the Evaluation Committee to be a very useful project for the student as they are then confronted with real problems in research and development.

Whether the balance of courses between classical materials, microelectronics and advanced chemistry is adequate remains to be solved within the department. The present balance with its focus on microelectronics and the associated emphasis on chemistry was justified by the presence of the microelectronic industry within the Jerusalem area. With the movement of Intel to Kiryat Gat this may no longer be the case. In addition, the area of advanced materials is changing very rapidly and classical materials are still being used to a very large extent in industry including the high-tech part of it. Thus the question came up as to whether a very strong

specialization in electronic materials could hinder students of JCE in finding jobs in competition with students from other universities, Technion, Ben Gurion University and Tel Aviv University in the future.

The Evaluation Committee realized that physical metallurgy as a major subject of materials engineering is contained in experiments provided during lab courses. However, the background material of this important field is not taught in a corresponding course, whereas ceramic and polymeric materials are treated in separate courses.

Recommendations:

Short Term (0-1 years):

1. The Evaluation Committee recommends a slight broadening of the education during the third and fourth years by including a course on physical metallurgy. With the development of advanced functional materials, which rely on outstanding electrical and magnetic properties, it would also be appropriate in the long term to cover quantum mechanics to a larger extent than done in the current curriculum.

5. Human Resources / Faculty

5a. Faculty/Teaching.

Observation and findings:

The faculty of the Department of Advanced Materials Engineering (AME) of the Azrieli College of Engineering, Jerusalem (JCE) consists of seven full-time members plus 15 internal adjuncts from other JCE departments and 24 adjuncts from outside the college, for example Hebrew University in Jerusalem and nearby industrial facilities. The combined expertise of the faculty adequately covers many aspects and elements of the structure-properties-processing-performance paradigm that characterizes the field of materials science and engineering. The faculty members are highly dedicated to the teaching missions of the department and the college and have large teaching loads, typically about three or four courses per semester. The curriculum they teach is a strong one, albeit with a major focus on materials for microelectronic engineering systems. Input from students and alumni suggest that the quality of the teaching is excellent and that the students and alumni are well satisfied with the education at JCE. The only negative aspects appears to involve: (1)

student desire for more breath in curriculum offerings outside of microelectronic materials engineering; and (2) some difficulty that students have in finding initial employment in the materials field after graduation, especially as it relates to perceived competition with materials students from the major research universities, the Technion and Ben Gurion University.

Recommendations:

Short Term (0-1 years):

1. Increased participation of the faculty is needed in the placement process as one component of assisting students in finding professional jobs after graduation.

Long Term (1-3 years):

1. Selected growth of the AME faculty should occur to enable better curriculum coverage in the more classical areas of materials science and engineering.

5b. Faculty/Research

Observation and findings:

All faculty members have at least modest and in some cases substantial research activities as based on publication outputs over the past five years. While some of the research, both experimental and theoretical, is conducted on site at JCE, the largest component appears to involve collaborations with colleagues at the major research universities or other off-site locations in Israel. Participation in research is recognized by the faculty as an important complement to the AME teaching mission. It is further evident from the self-evaluation document that the faculty wants to have more research as part of their professional activities. However, no specific processes or methods for implementing increased research involvement have been suggested, particularly within the constraints of the large commitment to teaching, the absence of a graduate program and therefore JCE graduate students, and the typically large infrastructure requirements of modern materials research. There is only a vague statement in the self-evaluation document that the AME faculty needs "more time and resources to pursue research." Also largely missing from the self-

evaluation document is mention of faculty involvement in or attendance at the meetings of professional societies, notably research-based ones. This is an activity of critical importance for enhanced faculty research involvement. Budgets for faculty conference travel at JCE are very small and have been decreasing in size in recent years. A large-scale increased budget for faculty travel could be a substantial morale builder for the JCE faculty.

Recommendations:

Short Term (0-1 years):

1. The college must nurture the research activities of the JCE faculty by providing increased travel funds to attend and present research findings at research conferences in their appropriate areas of expertise. The ability to attend one meeting every year or two outside Israel is not unreasonable.

Long Term (1-3 years):

1. The AME department should develop and implement a cost-effective program for enhanced faculty research participation, most likely one involving increased collaboration with faculty at the major research universities; e.g., the Hebrew University and Tel Aviv University. The program might include encouraging AME students toward enrolling at these institutions as graduate students to foster an identifiable JCE component of the research.
2. Selected growth of the AME faculty should occur to enable broader research capability, possibly aimed at the more classical areas of materials science and engineering.

5c. Technical Staff

Observation and findings:

The self-evaluation report described the technical staff as “professionally excellent.” The evaluation committee agrees. The best indication of this, apart from the staff’s very active participation in the visit and obvious dedication to their work, is the excellent condition and content of all of the AME laboratories. However, there are two concerns: (1) The laboratory needs for modern materials research and teaching are continuously evolving such that even replacement of standard equipment is always an ongoing financial commitment; (2) The growth plans for JCE to 3500

students by 2020 will have a major impact on the ability of the AME faculty and staff to handle increased enrollments, while maintaining the currently excellent hands-on laboratory experiences students currently enjoy.

Recommendations:

Long Term (1-3 years):

1. The AME faculty should develop strategic plans for future equipment acquisitions and additional technical staff, including definition of needed areas of expertise. The plans should take into account potential changes in the curriculum, increased research activities of the faculty, and evolutionary changes in the field of materials science and engineering.

6. Students

Observation and findings:

The current students the committee spoke with, 1st to 4th year, have a high level of *esprit de corps*, who think they are receiving an excellent education and that the course curriculum is demanding. They conveyed clearly to the committee that they have an excellent rapport with the faculty members of this department. The alumni we engaged with feel they received, by and large, an excellent preparation for working in high-tech industry. And those who continued on for a M.Sc. degree at other institutions in Israel, mainly in chemistry, feel they received an excellent education or as the French would say a "*une tres bonne formation.*" The current students and alumni think that they need more help in placing them in positions in high-tech industry. They also expressed strongly that they feel at a disadvantage with respect to those students graduating from the Technion-I.I.T. and Ben Gurion University because often industrial companies do not want students from a college, simply because they think university students are better prepared for high-tech industry.

Recommendations:

Short Term (0-1 year):

1. There is an immediate need for an upgrading of the placement office for positions in high-tech companies.
2. There is also an immediate need for more and better public relations for JCE within Jerusalem and the rest of Israel, which will also help to increase the

applicant pool. It should also be possible to publicize what JCE is doing in the USA and Western Europe.

Long Term (1-3 years):

1. The two points made above need to be vigorously and continuously worked on as they are crucial for supporting the needs of the students and concomitantly the needs of JCE.

Until the next cycle of evaluation:

1. The two points made above need to be vigorously and continuously worked on as they are crucial for supporting the needs of the students and concomitantly the needs of JCE.

7. Research

Observation and findings:

The Evaluation Committee agrees with the President Prof. Avi Domb and the representatives of the Department for Advanced Materials Engineering that teaching has the highest priority among the members of the faculty and that research in close connection with teaching remains to be a topic of high priority. The teaching load of up to 12 hours a week is mentioned within the evaluation report as a major obstacle of being more successful in research. The Evaluation Committee recognized that the missing graduate program and the missing dedicated equipment (i.e. high resolution and analytical transmission electron microscopy) do even more to impede doing research in the area of advanced materials.

Based on publications and the reputation of the corresponding journals the research done so far in the department reveals a broad distribution among the faculty regarding its quantity and quality. In the light of the discussed obstacles it is conceivable that the average quantity has to remain low.

Being informed about current research in one's own field requires access to periodicals, which appeared to be sufficiently the case within the department. Attending conferences is another means of obtaining information about ongoing research nationwide or worldwide. However, the available budget for travelling is too small to allow faculty members to participate regularly in conferences and/or workshops.

Conducting research by the faculty of the department is at present achievable only by cooperating with groups outside the college. This certainly requires time and commitment outside the teaching hours. In this context the teaching load could be reduced by applying for a reduction of teaching load within a special program instituted by the JCE executive committee.

The Committee recognized that within the Hebrew University equipment exists that allows state of the art characterization of materials and which has already been used to train JCE students during lab courses and final projects. This could also be the basis of cooperating with colleagues from this university. Additionally, Tel Aviv University has a Nanoscience and Nanotechnology Center, which should be taken advantage of.

Recommendations:

Short Term (0-1 year):

1. An increase of funds for attending conferences is recommended for the faculty members of the department and the reasons are outlined above.
2. The committee recommends to the faculty members to identify common research projects with related departments of other colleges and universities within Israel.

Long Term (1-3 years):

1. Research projects with other colleges and universities should be fostered as they could help to meet the intentions of the department for increasing their own research activities.

8. Self-Evaluation Process

Observation and findings:

The self-evaluation document of the Department of Advanced Materials Engineering (AME) in the Azrieli College of Engineering represents a good attempt to identify strengths and weaknesses of all aspects of the operation of the program. Altogether some 19 strengths and 9 weaknesses were identified and the self-evaluation process was assessed as being “very effective.” However, little evidence, and certainly no quantitative evidence based on metrics other than student grades, was presented to support this conclusion. Nor was an actual process of, or a flow chart for, self-evaluation presented in the document, other than to say in words that certain

information was gathered and observed to be favorable. Additionally, continuous-improvement plans and results based on the strength/weakness data that was gathered were largely absent, as were statements concerning their regularity or periodicity. It is therefore difficult to argue based on this self-evaluation document that a “culture of evaluation” is effectively in place. Yet, the Evaluation Committee agreed unanimously that it was very impressed with the department, its faculty, staff, students, alumni, laboratories, and curriculum and that there are many elements of excellence. The Committee also agreed unanimously that the department is much better in what it does than what is exhibited in the written report that was submitted.

Chapter4: Summary of Recommendations and Timetable

Short Term (0 to 1 years):

1. The faculty of the AME department should undergo a tutorial on how to better organize, promote, and implement a self-evaluation process that operates on a regular basis.
2. Proceed as smoothly as possible with construction of the new facilities, which are supposed to be completed within one year.
3. Revise the mission statement to reflect accurately areas of study at JCE.
4. Establish a methodology to vet the mission statement with all relevant constituencies: faculty, students, alumni, and industry.
5. The Evaluation Committee recommends a slight broadening of the education during the third and fourth years by including a course on physical metallurgy. With the development of advanced functional materials, which rely on outstanding electrical and magnetic properties. It would also be appropriate in the long term to cover quantum mechanics to a larger extent than done in the current curriculum.
6. Increased participation of the faculty is needed in the placement process as one component of assisting students in finding professional jobs after graduation.
7. The college must nurture the research activities of the JCE faculty by providing increased travel funds to attend and present research findings at research conferences in their appropriate areas of expertise. The ability to attend one meeting every year or two outside Israel is not unreasonable.
8. There is an immediate need for an upgrading of the placement office for positions in high-tech companies.
9. There is also an immediate need for more and better public relations for JCE within Jerusalem and the rest of Israel, which will also help to increase the applicant pool. It should also be possible to publicize what JCE is doing in the States and Western Europe.

10. An increase of funds for attending conferences is recommended for the faculty members of the department and the reasons are outlined above.
11. Faculty members should identify common research projects with related departments of other colleges and universities within Israel.
12. The faculty of the AME department should undergo a tutorial on how to better organize, promote, and implement a self-evaluation process that operates on a regular basis.

Long Term:

1. Regularly revise mission statement as JCE matures as an institution and additional students enroll.
2. Implement regular reviews of the mission statement following a well-defined methodology and involving faculty, students, alumni, and industry.
3. Upon success with the growth and expanding plans of the institute for the next two years, going further with expanding the JCE facilities, as suggested by the long term plans.
4. Selected growth of the AME faculty should occur to enable better curriculum coverage in the more classical areas of materials science and engineering.
5. The AME department should develop and implement a cost-effective program for enhanced faculty research participation, most likely one involving increased collaboration with faculty at the major research universities; e.g., the Hebrew University and Tel Aviv University. The program might include encouraging AME students toward enrolling at these institutions as graduate students to foster an identifiable JCE component of the research.
6. Selected growth of the AME faculty should occur to enable broader research capability, possibly aimed at the more classical areas of materials science and engineering.
7. The AME faculty should develop strategic plans for future equipment acquisitions and additional technical staff, including definition of needed areas of expertise. The plans should take into account potential changes in the curriculum, increased research activities of the faculty, and evolutionary changes in the field of materials science and engineering.
8. The two points made above need to be vigorously and continuously worked on as they are crucial for supporting the needs of the students and concomitantly the needs of JCE.
9. Research projects with other colleges and universities (Hebrew University, Bar Ilan University, Tel Aviv University, Ben Gurion University, Ariel University) should be strengthened and fostered as they could help to meet the intentions of the department for increasing their own research activities.

Signed by:



Prof. Enrique J. Lavernia-Chair



Prof. Doron Aurbach



Prof. Ronald Gibala



Prof. Dr. Reiner Kirchheim

S

Prof. David N. Seidman

Appendix 1: Letter of Appointment

March 2014

Prof. Enrique J. Lavernia,
College of Engineering,
University of California, Davis
USA

Dear Professor Lavernia,

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. 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 **Material Engineering**. In addition to yourself, the composition of the Committee will be as follows: Prof. Ronald Gibala, Prof. Reiner Kirchheim, Prof. Doron Aurbach, and Prof. David Seidman.

Ms. Daniella Sandler will be the coordinator 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 the Chair of this most important committee.

Sincerely,

Prof. Hagit Messer-Yaron
Deputy Chairperson,
The Council for Higher Education (CHE)

Enclosures: Appendix to the Appointment Letter of Evaluation Committees

cc: Ms. Michal Neumann, Deputy Director-General for QA, CHE
Ms. Daniella Sandler, Committee Coordinator

Appendix 2: Site Visit Schedule

Materials Engineering - schedule of site visit

ICE- Jerusalem

Sunday, April 27th 2014

Time	Subject	Participants
09:30-10:15	Opening session with the heads of the institution and the senior staff member appointed to deal with quality assessment	Prof. Avi Domb - President Prof. Eitan Manor - Vice President for Academic Affairs Prof. Deborah Shalev - The Quality Assessment and Assurance Superior
10:15-10:45	Meeting with Head of the Department of Advanced Materials Engineering	Prof. Eitan Manor - Head, Department of Advanced Materials Engineering Dr. Avigdor Zangvil - Deputy Head, Department of Advanced Materials Engineering
10:45-11:30	Meeting with the academic and administrative heads of the Department of Materials Engineering	Eng. Michael Mizrahi - Lab Manager Ms. Tal Sarig - Faculty Administration Director Ms. Hadar Dar - Student Administration Director Ms. Marie Ben-Yishai - Head Librarian Ms. Sharon Moyal- Registrar
11:30-12:15	Meeting with senior academic staff (representatives of relevant committees)*	Prof. Tamar Raz; Prof. Deborah Shalev; Dr. Ruth Sfez; Dr. Alexander Resnik; Dr. Doron Azulay; Dr. Rakefet Ofek Almog;
12:15-13:00	Meeting with Junior and Adjunct academic staff **	Dr. Inna Popov; Dr. Assia Barkai; Dr. Yoni Rabinowits; Eng. Michael Mizrahi
13:00-13:45	Lunch (in the same room)	Closed-door working meeting of the committee
13:45-14:30	Meeting with B.Sc. students**	
14:30-15:30	Tour of facilities: Classrooms, library, offices	
15:30-16:15	Meeting with Alumni**	
16:15-16:45	Closed-door working meeting of the committee	
16:45-17:30	Summation meeting with heads of the institution	Prof. Avi Domb - President Prof. Eitan Manor - Vice President for Academic Affairs Dr. Avigdor Zangvil - Deputy Head, Department of Advanced Materials Engineering Prof. Deborah Shalev - The Quality Assessment and Assurance Superior

* The heads of the institution and academic unit or their representatives will not attend these meeting_** 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.