Committee for the Evaluation of Electrical and Communication System Engineering

Study Programs

The Ruppin Academic Center

Programs in Electrical and Electronics Engineering

Evaluation Report

November 2016

Contents

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.**

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 Electronics Engineering Administration at the Ruppin Academic Center. The Committee's visit to the University took place on January11, 2016.

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

The Committee thanks the management of the Ruppin Academic Center and the Department of Electrical and Electronics 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 the Ruppin Academic Center

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

Overall the committee's impression of the Electrical and Electronics Engineering program at the Ruppin Academic Center (RAC) is very good. It indeed attains its goal of providing students with a "second chance" opportunity. The campus is beautiful and it provides a relaxed atmosphere in which the students can study. The students seem pleased with the hands on experience and the high attention to the individual that the program provides. They seem to benefit from their final project, especially when it is done in cooperation with industry.

The RAC has taken the recommendations of the earlier CHE evaluation committee from 2007 seriously, and has combined the three departments of computer engineering, electrical engineering and medical engineering into one School of electrical and computer engineering.

The school is still small and plans to grow, beyond its "natural" growth, in two directions: expansion of the preparatory programs to increase the number of students entering the college, and expanding on the M.Sc. program to increase the number of students and improve research productivity.

The current emphasis on more research production needs to be evaluated so that the college does not compromise its primary mission.

2. Mission and Goals

Observations and findings

Following the committee's request, the committee has received a document from RAC explaining the mission of RAC. That document describes ways in which the RAC seeks to fulfill its mission:

- To help students not accepted to universities
- To offer unique academic programs designed to meet the needs for education in specific occupations as demanded by the labor market, offering theoretical and practical expertise. Specifically, Ruppin's flagship Immigration and Social Integration program responds to Israel's most challenging socio-economic issue, while its School of Marine Sciences has a unique facility for marine studies that attracts scientists from other research institutes and universities wishing to conducts research in this area.
- In its mission to prepare students to enter the labor market, Ruppin also plans to strengthen the focus on its master's programs, particularly those conferring professional qualifications in particular professions, such as power (high current) electrical engineering and social work.
- To facilitate accessibility to higher education, Ruppin views its preparatory programs (one of nine months duration, and the other of 14 weeks) as the means to fill the gaps in the prospective students' high-school educations and to enable them to prepare efficiently for academic studies. Furthermore, during the first year of studies, academic reinforcement is given to those students experiencing difficulties. Finally, in keeping with Ruppin's 'accessibility approach,' it is also seeking to attract students from untapped sectors—the Arab and ultra-orthodox populations in particular.
- As part of Ruppin's mission to ensure that its graduates find employment, the institute will strengthen its efforts to actively aid students as they enter the employment world. This will be achieved in two ways: first by

establishing a new unit for recruitment aimed at helping students and graduates to find jobs, and, second, by establishing a strong network of Ruppin alumni. Ruppin views these alumni as a valuable resource both for current students and for the institute itself. To this end, an alumni website is currently under construction.

The committee found that the RAC fulfills its mission in offering a chance to students who were not accepted to the universities. The committee was also impressed by the success of the preparatory program.

Recommendations

Essential:

- The M.Sc. programs that are being planned should not compromise the uniqueness of the college – the special attention to the students. Also, for Master programs, the Institute must have a sufficient body of full-time faculty with relevant research activities and scientific publications to support the program.
- As the college works to build on its success and expand, the committee believes that more engineering programs should be connected with the unique Marine program the college currently offers in the Michmoret campus. A program involving electrical engineering aspects such as sensing and autonomous systems (as well as communication, localization and signal processing), together with mechanical engineering aspects such as robotics, with the current scientific program of marine studies would be unique.

3. Organizational Structure

Observations and findings

The committee notes that this administrative structure seems to be effective. In particular, the committee was impressed by the candor and the passion of the President. Her passion for the college and its programs was notable. In

addition, the committees that have been established, both at the college level and within the School of Engineering appear to be functioning well in the appropriate governance of the programs. The merger of the Department of Electrical and Electronics Engineering and the Department of Computer Engineering appears to have been effective in fostering the development of a critical mass that can be sustained.

The other campus of Ruppin, in Michmoret, where the Marine studies are located, was not visited by the committee.

Recommendations

Essential:

- The committee has learned that this is the last year that the president will serve in her current role. Care should be taken to ensure that her successor as president will carry the same dedication to the institutional mission so that the institution continues to succeed.
- Building on the success and uniqueness of the Marine program, specific engineering programs should be encouraged to develop tracks in collaboration with the Marine program.

4. Study Programs

Observations and findings

The Department of Electrical and Computer Engineering offers programs of study leading to the B.Sc. in Electrical and Electronics Engineering, the B.Sc. in Computer Engineering, and the B.Sc. in Medical Engineering. The program of study in Electrical and Electronics Engineering has four components: basic mathematics and physics, fundamental courses in electrical and electronics engineering, advanced courses in electrical and electronics engineering, and specialization clusters. The specialization clusters offer the students the opportunity to obtain more in depth knowledge within the cluster area. There are clusters in telecommunication systems, signal processing,

computer systems, and medical systems. Each cluster contains three academic courses and an advanced laboratory. Each student must complete at least two clusters as well as a final project

The committee observed that the program of study serves the students well. They are encouraged by the faculty and mentored by the faculty, and over their years of study they largely close the gap and become active and successful engineers.

The college understands that it needs to work harder as a community to overcome the gap between the level of students accepted at university and the level of those accepted at a college. There are many ways in which it does so. There are preparatory programs for the students which are completed prior to their enrollment in the college that appear to be effective and should be funded. The faculty of the program work very hard and enthusiastically to support the students in their studies. Classes are small in size and the faculty provide support that is tailored to each student's needs. The faculty feel a responsibility to support the students and the students appreciate this personal touch. The strong "second chance" mentality and the actions taken to support the students help the students to be successful, yet the drop-out rate of each class over the four year program is close to 40% (see Table 4.1of the self-evaluation report).

The program of study also has many other features that contribute to the success of the students. Faculty members are encouraged to explore new pedagogical strategies and the incorporation of new technologies in their teaching. The hands-on nature of many of the courses and laboratories gives the students practical knowledge that they use effectively in industry. The laboratories are suitable for their intended purposes, providing facilities where the students can gain the hands-on experiences that are so useful to them. The development of final projects that involve industry partnerships is moving in a direction that could result in a "win-win" situation for most

students. The committee heard that when working on projects situations arise in which the student indeed becomes the teacher and the teacher becomes the student. This close cooperation in solving problems benefits all involved. The evening program makes it possible for students who must work while they pursue their studies to do so without compromising their academic progress. Indeed, the opening of the evening program is a service to the academic community in this regard.

There are some areas in which the program can be improved. The students expressed a desire for more opportunities to improve their English skills.

Students also asked that the curriculum be enhanced by the inclusion of more diversity in programming languages and computing systems. They pointed out that versatile programing skills are required today by most employers from engineers working in design. In order to improve the graduate potential in the job market, it is recommended to equip the student with a richer portfolio of computer languages that are used today by the industry, and also to provide an advanced course addressing issues such real-time programing etc.

Improvements are also needed in the computing infrastructure that is available to students.

The committee has been informed that there is a very new M.Sc. program in Electrical and Electronics Engineering, which is not reported in the self-evaluation report. As currently authorized, this program is a non-thesis degree. The committee understands that the college plans to develop a M.Sc. program with thesis. Rationale for development of a thesis-based M.Sc. include enhancing the stature of the college and improving the college's ability to recruit high quality students and faculty. However, the mission of master with thesis program is to prepare the students for a career in

research, hence, they require a comprehensive research environment, with a broad spectrum of research areas and well-equipped research laboratories.

As planning for development of a thesis-based M.Sc. proceeds, careful attention should be paid to the impact of the program on the atmosphere of the college and its ability to carry out its institutional mission.

Recommendations

Essential:

- As the college plans for the introduction of a thesis-based M.Sc. degree, it is critical that careful thought be given to the impact that offering such a degree could have on the atmosphere of caring and personal attention that is so important to success of undergraduate students. It is essential that the college not jeopardize its ability to carry out its mission.
- Building on the strength of the Marine Program (unique in the country), integration of engineering disciplines and specifically electrical engineering (sensing, signal processing, autonomous control, etc.) would create a unique opportunity for RAC .

Advisable:

- Consider enhancing the students' strength in computing-related areas by expanding their exposure to programming languages and systems used today by the industry beyond Matlab and C/C++.
- Students should be offered students more opportunities to improve their English skills.

Desirable:

- Students indicated that most of them are commuting students and noted that they would very much appreciate improvement in the parking situation at the campus.
- Improve the computing infrastructure available to students so that they are working with computers and software that is modern and provides them with a productive working environment.

5. Human Resources / Faculty

Observations and findings

The college's primary mission is teaching and it seems to be fulfilling that mission well. The school is not large, and the small number of students fosters an atmosphere in which the faculty members can devote significant attention to each student's needs.

As is the case in other colleges, the teaching load of the faculty is high. The normal load is 12 hours per week for a lecturer, and the committee understands that the load is 10 hours per week for a professor. There is the possibility of a reduction in this teaching load if a faculty member does research and excels in it. The metric used for determining the level of a faculty member's research activity is the number of publications in journals with a high impact factor and the volume of grant funding acquired.

The committee found that the RAC committee structure is active and effective. At the department level there is a Teaching and Academic Development Committee, an Academic Program Committee, and an Ad-Hoc/Exceptions Committee. In addition, there are committees at the School level, and at a higher level the President has appointed a Research Committee whose task is to make recommendations concerning teaching reliefs and seed funding in connection with research. It was noted that similar relief is available for faculty who excel in teaching. However, to ensure that the high standards of teaching are maintained and that the excellent teachers continue in what they excel in, this benefit can be exchanged for a salary bonus and/or assistance in teaching (TAs).

The faculty at RAC feel a strong sense of responsibility for supporting the students. This sense of responsibility was much more evident at RAC than at the universities. It appears that the college does not grant tenure to faculty members, but the committee understands that faculty members are rarely

asked to leave the college after they have been employed there for five or more years. The adjunct faculty members appear to be generally satisfied with their position at RAC and their contribution to the program. The institution has provided them with space in which to meet with students while they are on campus.

The college would like to add M.Sc. programs whenever possible, to enhance the research profile of the college and by doing so to build the stature of the Ruppin Academic Center. In addition, an enhanced research profile could improve the college's ability to recruit and retain well qualified faculty who are interested in developing and maintaining their research activity.

The committee has learned that in the last five years, 57 adjunct lecturers have taught in the Electrical & Electronic Engineering program; 15 of these are no longer employed at the RAC and 19 have been teaching at the institution for over 7 years. The RAC policy in the last 5 years has been that teachers with a low grade (4.5 out of 6) do not remain in the employ of the RAC.

Recommendations

Essential:

- The purpose of research in the context of the mission of the college should be carefully evaluated. If faculty members are recruited based on their teaching skills and are expected to excel in teaching and the mission of the college is focused on providing high quality teaching, the question must be raised as to whether it is fair to have the promotion process dependent on their ability to publish in high impact factor journals. Research that is directed towards practical applications, perhaps in collaboration with industry, might better serve the purposes of having the faculty maintain their currency in the field, the students engaged in state

of the art technologies, thereby improving the stature of the Ruppin Academic Center in a unique way.

6. Students

Observations and findings

One of the comments of the 2007 CHE evaluation committee was that the dropout rates were a troubling issue at that time in RAC. The committee got the impression that RAC is dealing seriously with this issue, in view of its stated mission of providing the students with a ``second chance.'' There are preparatory programs for new students, and the faculty work very hard and enthusiastically to support the students in their studies. Classes are small in size and the faculty provide support that is tailored to each student's needs. The actions taken to support the students and the "second chance" mentality are appreciated by the students, yet the drop-out rate of each class over the four year program is above 40% (see Table 4.1).

Students very much appreciate the individual personal support they receive at RAC. They also value the emphasis on practical, hands on education. The engineering projects the students do, when done in collaboration with industry, seem to help students find a job once they graduate. It is also clear that some of these projects are indeed a collaboration with the instructor from the college, who is learning and making the effort together with the students. When interactions of this kind occur, there are situations in which student and teacher reverse their roles, and the student becomes the teacher and the teacher learns as well. The committee observes that an atmosphere where this is enabled is a good model.

The students at RAC have to work harder to bridge the gap between them and students accepted to the universities. Both students and faculty understand this and the gap is narrowed with the support of the faculty and administration in small classes and instructional assistance that is tailored to

students' needs. About 15% of the students would like to continue their studies, but their preference is to do it in a different place, probably at a university.

Students expressed the desire to have a larger variety of software languages and systems in the curriculum.

The average course grades are relatively high, (Fig. 3.6) and as a result the number of students graduating with honor is large (35% of the class in 2013). It is suggest to adopt a policy that the number is limited to the top 5% or 10%.

Recommendations

Essential:

- The engineering projects in collaboration with industry seem to serve the students well. This engagement should be continued and expanded upon, in a way that would be a win-win to the institute and the students in the future. Perhaps some preference should be given to projects with anticipated publication potential. In addition, the RAC might consider developing a project activity model that involves some industry contribution to the institution in terms of equipment or donation of funds to support the activity.
- The preparatory programs seem to work well and clearly foster activities that further the institutional mission. Further funding should be given to support their growth.
- Limit the number of students graduating with honor to the top 5% or 10% of the class.

Advisable:

- Better support of students seeking placement in jobs is desirable. Connections with industry should be enhanced.

- English skills of the students could be improved. Currently in engineering, there is no mandatory English course.
- Additional practical courses could be added to provide the students with experience in a wider variety of software platforms and tools.

7. Teaching and Learning Outcomes

Observations and findings

A primary objective of the college is to give students a second chance. The RAC appears to be effective in accomplishing this goal, starting with the preparatory programs, through the evening program, and in general via the personal touch and individual support the staff provides to the students.

The academic preparation program has two versions, a short one of 14 weeks duration and a longer one involving 8 or 9 months of study, and both seem to be effective. The measure of success is how the students who participate in these academic preparatory program perform and how their performance compares with that of the students accepted without such preparation. The committee received statistical data indicating that these preparatory programs are successful. RAC would like to offer them to more students. The evening program takes 12 semesters (compared to the normal 8 semesters of study) and students also take advantage of these evening courses to catch up with gaps in their normal program.

Laboratories are available to support hands-on learning and provide facilities in which the students can complete final projects. The projects done in collaboration with industry help the students find employment in their field once they finish and the staff provides assistance with job placement where possible.

The faculty is encouraged to experiment with new technology, and computer resources are in place to enable this activity. Students expressed a desire to

have better computer resources, and more diversity in the software languages and systems available to them.

Recommendations:

Advisable:

- Additional diversity in the courses being offered, more in terms of software languages is desirable.

8. Research

Observations and findings

Faculty at RAC see their primary mission as teaching, but they still want to do research to stay current and to be promoted. Many of the faculty are engaged in practical research, mainly with industry. Some get teaching relief following publication of their research or receipt of grants related to their research. In addition, some seed funding is available through the college's research committee. In general faculty perceives that there is a loud and clear message from the higher administration to promote their research. So that they can be more active in research, the faculty would like to have fewer teaching hours. It has been mentioned that three young faculty member have recently left to HIT since they were offered better research facilities. The faculty also believe that an M.Sc. program with thesis would provide them with students working on the topics of their interest.

Another reason for the college to promote more research activity is to enhance the stature of the institution and hence be in a position to recruit better students and build the institution's reputation. Students voiced concern about the way their institution is perceived by industry.

Recommendations

Essential:

- The college needs to carefully re-evaluate its promotion of research, so that it is aligned with the primary mission of RAC. If research compromises the good, personal, teaching that is the hallmark of the college, it does not serve the institution well. On the one hand, the staff would like to see the college grow, have more students and more research. On the other hand, it is possible that an enhanced focus on research could compromise the personal touch the faculty provides the students currently with, and hence its uniqueness. The projects done in collaboration with industry, doing practical research, might be the best avenue to promote the college mission via research. The faculty can collaborate with students learning new tools/procedures and experimenting with new systems. This would enable the faculty members to stay current, bond more with industry needs, and help the students find a position once they graduate.

9. Infrastructure

Observations and findings

The labs currently serve their purpose, but the number of stations can be expanded and some of the equipment is dated and should be updated. Students indicated that the computing infrastructure is very slow, so there is room for improvement.

Classes are small, and that enables the personal touch that the college strives to foster.

Parking was pointed out as an issue by some students.

Recommendations

Desirable:

- Some update in labs, particularly in the computing infrastructure would be desirable.

10. Self-Evaluation Process and implementation of previous recommendations

Observations and findings

The committee has found that the institute has taken the recommendation of the previous evaluation in a serious manner:

- The three Programs were merged into one department.
- Faculty got more involved in research.
- Teaching quality seems to satisfy the students, and they appreciate the individual attention.
- Labs were improved.

Chapter 4: Summary of Recommendations

Essential Recommendations:

- As a successor for the president is chosen, care should be taken to appoint a person who will work to preserve the current college atmosphere.
- The practice of basing promotion of RAC faculty on an assessment of their research productivity should be re-evaluated.
- The M.Sc. program that is planned should be carefully evaluated, so that the individual treatment the students receive and appreciate will not be compromised.
- The successful preparatory programs provide the "second chance" to students and should be expanded and funded.
- Development of potential electrical engineering programs in connection with the strong Marine Studies program should be encouraged.
- Projects conducted in collaboration with industry should be encouraged, to benefit both the institution and its students.
- The M.Sc. programs that are being planned should not compromise the uniqueness of the college – the special attention to the students. Also, for Master programs, the Institute must have a sufficient body of full-time faculty with relevant research activities and scientific publications to support the program.
- As the college works to build on its success and expand, the committee believes that more engineering programs should be connected with the unique Marine program the college currently offers in the Michmoret campus. A program involving electrical engineering aspects such as sensing and autonomous systems (as well as communication, localization and signal processing), together with mechanical engineering aspects such as robotics, with the current scientific program of marine studies would be unique.
- The committee has learned that this is the last year that the president will serve in her current role. Care should be taken to ensure that her successor

as president will carry the same dedication to the institutional mission so that the institution continues to succeed.

- Building on the success and uniqueness of the Marine program, specific engineering programs should be encouraged to develop tracks in collaboration with the Marine program.
- The purpose of research in the context of the mission of the college should be carefully evaluated. If faculty members are recruited based on their teaching skills and are expected to excel in teaching and the mission of the college is focused on providing high quality teaching, the question must be raised as to whether it is fair to have the promotion process dependent on their ability to publish in high impact factor journals. Research that is directed towards practical applications, perhaps in collaboration with industry, might better serve the purposes of having the faculty maintain their currency in the field, the students engaged in state of the art technologies, thereby improving the stature of the Ruppin Academic Center in a unique way.
- The engineering projects in collaboration with industry seem to serve the students well. This engagement should be continued and expanded upon, in a way that would be a win-win to the institute and the students in the future. Perhaps some preference should be given to projects with anticipated publication potential. In addition, the RAC might consider developing a project activity model that involves some industry contribution to the institution in terms of equipment or donation of funds to support the activity.
- The preparatory programs seem to work well and clearly foster activities that further the institutional mission. Further funding should be given to support their growth.
- Limit the number of students graduating with honor to the top 5% or 10% of the class.
- The college needs to carefully re-evaluate its promotion of research, so that it is aligned with the primary mission of RAC. If research compromises the good, personal, teaching that is the hallmark of the college, it does not serve

the institution well. On the one hand, the staff would like to see the college grow, have more students and more research. On the other hand, it is possible that an enhanced focus on research could compromise the personal touch the faculty provides the students currently with, and hence its uniqueness. The projects done in collaboration with industry, doing practical research, might be the best avenue to promote the college mission via research. The faculty can collaborate with students learning new tools/procedures and experimenting with new systems. This would enable the faculty members to stay current, bond more with industry needs, and help the students find a position once they graduate.

Advisable Recommendations:

- RAC should explore ways of providing better support for the students as they seek employment after graduation. They would benefit from programs that informing them about industry needs and potential sources of employment.
- Students should be offered more opportunities to improve their English skills.
- Students should be offered the opportunity to gain experience with a more diverse set of programming languages and systems and software tools.
- Consider enhancing the students' strength in computing-related areas by expanding their exposure to programming languages and systems used today by the industry beyond Matlab and C/C++.
- English skills of the students could be improved. Currently in engineering, there is no mandatory English course.
- Additional practical courses could be added to provide the students with experience in a wider variety of software platforms and tools.

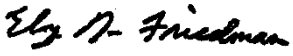
Desirable Recommendations:

- Improve the computing infrastructure available to students so that they are working with computers and software that is modern and provides them with a productive working environment.

- Students would appreciate improvement in the parking situation on campus.
- Students indicated that most of them are commuting students and noted that they would very much appreciate improvement in the parking situation at the campus.

Signed by:

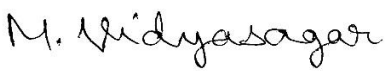
Prof. Alan Oppenheim - Chair



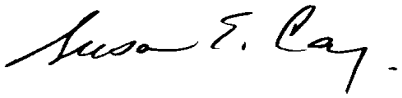
Prof. Eby G. Friedman

Prof. Ehud Heyman

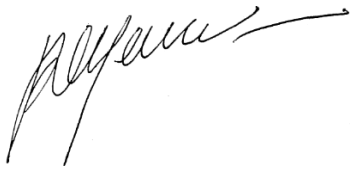
Dr. Orly Yadid-Pecht



Prof. Mathukumalli Vidyasagar



Prof. Susan Conry



Prof. Roch Guerin

Prof. Dr.-Ing. Walter Kellermann

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

Electrical and Electronics Engineering - Tentative schedule of site visit
Ruppin Academic Center

Monday 11.1.2016

Time	Subject	Participants
9:30-10:15	Opening session with the heads of the institution and the head of the School of Engineering	Prof. Shosh Aard, President Prof. Shlomo Globerson, Dean Prof. Pinchas Dahan, Head of the department
10:15-11:00	Meeting with the academic heads of the Program of Electrical and Electronic Engineering	Prof. Pinchas Dahan, Head of the department Dr. Ben Zion Dekel, Head of the program
11:00-11:10	Break	
11:10-12:10	Meeting with academic staff*	Dr. Ben Zion Dekel, Dr. Raffi Cohen, Dr. Dov Melonek, Dr. Arie Raichman, Dr. Jontan Molcho Dr. Benny Salomon, Dr. Yinon Stav, Dr. Gady Frenkel, Mr. Uzi Paz, Ms. Nina Mazor
12:10-13:00	Lunch (in the same room)	Closed-door working meeting of the committee
13:00-13:40	Meeting with adjunct lecturers	Prof. Joseph Appelbaum, Prof. Nathan Blaunshtein, Dr. Moshe Deutsch, Dr. David Brooks, Dr. Pinchas Malits, Dr. Nehemia Schwartz, Mr. Gidi Cohen, Mr. Amos Zaslavsky, Mr. Shimshon Levi
13:40-14:20	Meeting with students	Second Year: Nesterenko Alexey, Journo royi, Fisher Ori Third Year: Dukan Ilan, Konen Hed Fourth year: Edri Adi, Vaza Ori, Wolf Nadav
14:20-15:00	Final Project Presentation and Alumni	
15:00-15:10	Break	
15:10-15:50	Tour of campus (library and labs)	Introduction In the Lab: Dr. Ben Zion Dekel, Dr. Benny Salomon, Dr. Raffi Cohen, Mr. Efraim Bergman, Mrs. Hila Ratzon
15:50-16:20	Closed Door Meeting	
16:20-16:50	Summation meeting	Prof. Shosh Arad, President Prof. Shlomo Globerson, Dean Prof. Pinchas Dahan, Head of the department

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