



Cheshvan 12, 5780
November 10, 2019

To:
Ms. Maria Levinson-Or
Senior Coordinator
Quality Assessment Division (QAD)
Council for Higher Education
Jerusalem

Implementation Report of the Physics Department at Bar-Ilan University

Dear Ms. Maria Levinson-Or,
Enclosed please find the Implementation Report for the Department of Physics at Bar-Ilan University. The Implementation Report was written by the Chair of the Department of Physics, Prof. Lior Klein. It was approved by the Dean of the Faculty of Exact Sciences and me.

Committee Recommendation	<u>Steps toward implementation (including time table)</u>
<p><u>1.</u> Pay attention to succession planning for the Deputy Department Head. Dr. Yossi Ben-Zion is playing a very key role in the physics department at BIU, in a number of respects. We consider it a risk that such a key role is tied to a member of the teaching faculty, as opposed to the research faculty, but Dr. Ben-Zion is eminently qualified nonetheless. Every effort should be made to ensure that he remains happy in this role. Even though he is not close to retirement, succession planning should be considered for this position, as it is rare to find such responsibility concentrated in a single individual.</p>	<p>The higher administration of the university recognizes and highly appreciates Dr. Yossi Ben-Zion's considerable investment in his academic and administrative activities and his tremendous contribution to the students of the Physics department, to the department and to the university. We enable Dr. Ben-Zion to express his entrepreneurship and leadership character both in the field of teaching and in the departmental management areas. For example: developing two MOOC courses (one that has already been launched and the other at the beginning of the development process), development of laboratory courses and their equipment, full partnership in the development and evolution of the curriculum and more. Teachers of the Academic Teaching Track, like Dr. Yossi Ben-Zion, have a Scientific Collaboration Fund, which is used for attending scientific conferences in Israel and abroad. The Academic Teaching Track is a Senior academic track. Both the Physics Department and the Faculty of Exact Sciences regard this track highly important and rewarding. Therefore, rigorously selection process is conducted in order to recruit outstanding academic staff that are highly proficient in both teaching and management. We feel blessed with these staff members, in particular with Dr. Yossi Ben-Zion, and believe</p>



	<p>they are very worthy and suitable for long-term departmental management role, and to be the senior faculty member closest and most accessible to the students. Thus, the fact that Dr. Ben-Zion assumes the many functions he does is not by default or a necessity, but rather first choice of the department. We believe it is advantageous over having a research faculty member assuming the same roles. In the future, when the time comes, the Physics Department will recruit or train a suitable person to work with Dr. Ben-Zion and later replace him in all of his many academic, educational and administrative activities. At that stage, the department will also consider dividing these duties among a few people.</p>
<p><u>2.</u> Identify suitable visitor space to enhance interactions with outside researchers. At least one or two offices should be identified and made available for visitors in the main physics building. This is key to ensuring that the department can benefit from increased interactions with external colleagues. In addition, the university should look into ensuring that there are adequate spaces on campus for hosting workshops and conferences.</p>	<p>The department has recently allocated and renovated an office for visitors in the main physics building. In addition, there is an office for visitors in the Resnick building. Furthermore, we can now offer our visitors on campus accommodation in the recently opened guest house which has comfortable studio apartments. Regarding workshops and conferences, it should be noted that workshops are regularly held on campus including workshops organized by members of our department. For example, the Quantum Center which has been established by members of our department held its kickoff meeting in 2017 and will hold its second meeting later this year in the auditorium of the Nanotechnology Triplex.</p>
<p><u>3.</u> Reevaluate the health of the exchange program with Shandong, at both the undergraduate and graduate levels. This program does seem to be working, although the level of interaction between the Shandong students and Israeli students does not seem to be extensive. Take steps to ensure that the Shandong students remain happy with their experience at BIU. Look into the financial support provided to graduate Shandong students given their inability to hold TAs.</p>	<p>In the upcoming academic year (2019/2020), the number of students from Shandong will be 5 undergraduate students, 7 Master students and 1 Ph.D. student. Following the committee's recommendation, the department will undertake additional activities which will enhance the integration between these students and the Israeli students.</p> <p>The department has already hired a social coordinator who will focus on two goals – acquainting the students with the Israeli culture and the different religions in Israel, though tours in Israel, the Bible and geographical sites, as well as, organizing joint activities and meetings, including</p>



	<p>evenings where students will present their culture, customs and traditions to each other, and mutual Friday evening meals. Joint competitive activities (inspired by the Hackathon concept) will also take place.</p> <p>Furthermore, although there is in principal no legal problem with hiring an international TA, nevertheless, as far as we can determine most are not interested in teaching, the department will increase the scholarship provided to Shandong graduate students by 1,500 NIS per month, which is above the average monthly salary of TAs. We note that this year one of our Shandong graduate students did obtain a permit to work and will serve as a TA and that we will continue to encourage these students to serve as TAs in English.</p> <p>We hope that following the exchange program with Shandong we will establish programs with additional universities thus increasing our international activity which we consider as important to our development. We note that currently the number of international students in the Physics Department in all degrees (including postdocs) exceeds already 50.</p>
<p><u>4.</u> Take more proactive steps to increase the gender and ethnic diversity of the faculty. While the gender representation among the students appears reasonable, there are still very few women on the faculty. The lack of suitable women candidates is not an acceptable rationale for this situation. The department should be more proactive in its recruitment of women. To our knowledge, there are no Arab members of the physics faculty. Here too, extra effort should be made to identify and recruit outstanding Arab candidates.</p>	<p>Although the department does not have a declared hiring policy, we are fully aware of the importance of increasing the gender and ethnic diversity of our faculties. Therefore, we accept the committee's recommendation and we intend to increase our efforts in this area.</p>
<p><u>5.</u> Continue to monitor the success of the fledgling astrophysics program. The department has made excellent initial appointments in this area, but nevertheless close attention should be paid to ensure continued success. The current effort is below critical mass, and it must be expanded to remain viable.</p>	<p>We are aware of the need to expand the astrophysics program; therefore, recruiting more faculties in this field is one of our top priorities in our hiring policy in the next five years.</p>
<p><u>6.</u></p>	



Consider an expansion into particle physics. Particle physics is a major component of physics as a whole, and the lack of particle physics at BIU is conspicuous in comparison to the other Israeli universities. At present, particle physics elective courses must be taught by outsiders. Expansion into this area will require careful thought and planning, but it should be possible.

We see the benefits for the department in expanding into particle physics. Therefore, we will consider making such a move very seriously in the coming years. We would like to emphasize though that our first priority is to expand the fledgling astrophysics program.

We thank the CHE Committee for the helpful recommendations and hope to continue to improve the Department of Physics.

Sincerely,

Prof. Amnon Albeck
Vice Rector
In charge of Quality Evaluation

Cc:
Prof. Miriam Faust, Rector
Prof. Richard Berkovits, Dean, Faculty of Exact Sciences
Prof. Lior Klein Chair, Department of Physics