# The Mina and Everard Goodman Faculty of Life Sciences <br> Bar-Ilan University 

## To: COMMITTEE FOR THE EVALUATION OF LIFE SCIENCE STUDIES IN ISRAEL

Dear Prof. Regan (Committee Chair) and distinguished members of the committee,
We would like to thank you and the committee members for the in-depth assessment of our faculty. We were very happy to host you at our faculty for a whole day of panels and evaluations, and were glad to learn that you were impressed by the academic activities undertaken by the Faculty of Life Sciences at Bar-Ilan University. We have read the evaluation report that you prepared and have taken note of the comments that require further action on our part. Following is a point-by-point response to the issues raised in the report.

Sincerely,
Yaron Shav-Tal
Dean

| Committee Recommendation | Steps toward implementation (including <br> time table) |
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| 1. Teaching statements and reviews of any type <br> are not included in the evaluation (p. 3) | Evaluations for all courses are conducted each <br> semester and the type of questionnaire the <br> students receive is included in the table we <br> now provide. The Vice Dean for Undergraduate <br> studies evaluates the courses given by new <br> faculty. All reports reach the Dean. |
| 2. Less value is given to outreach and public <br> engagement activities at the junior faculty level <br> (p.3) | The faculty sees high value in outreach and <br> many of the faculty are involved in a different <br> kinds of outreach activities including junior <br> faculty. Still, the faculty management prefers <br> that junior faculty before tenure do not <br> undertake 'heavy duty' outreach activities so as <br> not to get sidetracked. |
| 3. The Committee strongly recommends that all <br> teaching for graduate students be in English <br> (p.3). That theses be written in English (p. 6) | As noted in the report, many of the courses on <br> the graduate level are taught in English, and the <br> faculty intends to gradually increase the <br> number of such courses. Over the past few <br> years, the faculty has introduced courses in <br> English as per the request of the CHE for our <br> undergraduate curriculum and most of the <br> literature (e.g., textbooks, articles) is in English <br> to maximize the exposure of our students to <br> the scientific language. |
| 4. Lack of complete supporting quantitative <br> information that was submitted in the SER (e.g., <br> percentage of each type of final exams, post- <br> doc numbers, number of students in each study <br> track, teaching evaluation questionnaire) (p. 4) | Please see attached new tables. <br> 5. A comprehensive set of data is vital - on <br> students, postdocs and faculty. There were <br> some errors in what was provided, and the <br> Committee had to request missing data - bothin Tables 1 and 2 is a result of different filtering <br> methods of the database. In table 1 all students <br> accepted to the program were included, while |

in table 2 we included only students that started their studies.
before and during the visit. An example of such an error is the significant discrepancy between the students numbers provided in Table 1 and Table 2. (p. 4)
6. High dropout rate of MSc (with thesis) and PhD students ( $>15 \%$; Table 6 of Supplementary material). While the high dropout rate of BSC students due to transfers to Med School is understandable, the Committee suggests enhancing the rigor of 'admission on probation' to graduate programs. (p. 4)
7. Relationships between faculty members -
keeping track of such things, including the
transparency of decision making etc. It is vita
to have a transparent and open process, to
increase diversity and participation. (p.5)
8. The undergraduate students told us midterm and final exams were often in multiple choice format, and that later, there was time with TAs to go over the answers. The faculty spoke more of short form or long form written answers. The Committee emphasizes the importance of learning how to write by receiving formative feedback before the final assessment. We acknowledge that it is time consuming for the faculty, but we think that training TAs in this providing constructive feedback would be beneficial. (p. 5)

We are closely monitoring both MSc with thesis and PhD students, to intervene in time and minimize dropout. We are currently monitoring academic progress and submission of annual progress reports. There is no 'admission on probation' for undergraduate students, certainly not more than $10 \%$ as the Committee thought. What is noted on p. 9 of the Committee's report in this regard is a misunderstanding.
The incoming dean initiated a faculty retreat, a faculty think-tank day, and several monthly faculty meetings in which decisions and policies have been presented to the faculty, all for sake of transparency. Also, several ad hoc committees have convened to discuss new initiatives or changes. The faculty are asked to vote on major issues that may concern major changes.
Both forms are available (MCQ and written answers) for final exams. The students are exposed to both during their studies - certain exams (e.g. courses in Genetics, Molecular biology) require written answers for the final exams while others use MCQ. There are several advantages to this: MCQs are objective and fair, as there is no room for personal bias or subjectivity in grading. MCQs can be used to test a broad range of knowledge (written exams are usually limited to 4-5 topics), including comprehension, application, analysis, and evaluation, making them a versatile choice for assessing a student's understanding of a subject. Additionally, MCQs reduce guesswork by offering several options to choose from, which encourages students to think critically and logically when answering the questions. But it is important to mention that our students are required to hand out lab reports in writing which require them to formulate complete answers. We also have a mandatory course on scientific reading skills that requires them to analyze scientific articles and write paragraphs. Nonetheless, we will encourage the faculty members to make more use of exams with written answers, and the Vice Rector now

|  | requires that all courses include formative <br> feedback before the final assessment. |
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| 9. Graduate students should be encouraged to <br> attend international conferences and present <br> their research in English. (p. 6) | We definitely encourage students to attend <br> international conferences and the faculty <br> provides travel fellowships for both MSc and <br> PhD students, in addition to some university <br> funding that is available. Furthermore, all PhD <br> students have their own funds that can be <br> allocated to attend international meetings or to |
| be used for the search for postdoc positions |  |
| abroad. |  |

committee with 6 faculty members that will propose a new program for undergraduate studies emphasizing research skills.
Student failures are assessed every semester by the vice dean for teaching, the faculty student counselor and the undergraduate student coordinator.
For final exam issues, the university has a dedicated department (Status committee) that assesses the necessity/justification of conducting new exams in case a student was unable to attend the final exam.
16. Committee recommends adding (to the teaching responsibilities list in the 'Teaching Regulations' document) which is relevant to all Faculty and adjuncts a requirement to attend several mandatory workshops. (p. 8)
17. Teaching appears to not be a main criterion for faculty promotion, unless the teaching survey score is very low. The Committee was concerned that nothing about teaching was required on the annual review forms for junior faculty. The adjunct faculty teaching should also be evaluated. The Faculty should make sure teaching excellence is evaluated and nurtured regardless of its relation to promotion. For both full-time and part-time instructors, class visits by faculty to observe (and provide constructive feedback) on teaching is recommended. (p. 8)

Teaching evaluations should also include the enthusiastic and talented adjunct faculty, which might benefit from annual peer-observations, reviews, and -feedback for improvement, in addition to the student course evaluations alone. (p.10)
18. There is some attrition in student numbers between those enrolled in the BSc and MSc tracks, and the MSc and PhD tracks. The Committee recommends that the Faculty track the numbers of 'dropouts' versus 'transfer to medical school' to develop strategies to assess the reason(s) for delay or attrition and properly address these issues. (p. 9)

This we concur is a key point. While it has been done, verbally, we will include it now in writing.

Teaching is a significant criterion in the promotion of faculty members, and the university's Promotion Committee examines the semester review forms in depth. The faculty takes these reviews seriously. The Vice dean for Teaching examines the teaching reviews each semester and when necessary, discusses issues raised in the feedback with a specific faculty member. Some faculty members have been asked to participate in teaching seminars to strengthen their teaching capabilities.
Moreover, the faculty nominates 2 teachers every year for the university's Excellence in Teaching award, out of several candidates. The Vice dean for Teaching examines every aspect of the candidate's teaching skills in the past 3 years.
In any case, we will encourage the adjunct faculty to participate in teaching workshops and will intensify the visits by members of the teaching committee to provide more feedback to faculty members.
It seems logical that the more advanced the degree the less students participate in it. The primary criterion for continuation is excellence but some students decide to turn to other careers (medicine, veterinary school, teaching etc.). We try to maintain contact with our alumni, but we are also devising polls to get a better idea of the current decision-making process of enrolled students to better understand why they decide to pursue higher
studies or not. We will also devise a system to track these students to obtain numbers of dropouts versus transfer to medical school. In essence, at the beginning of the semester. the counseling team will go over the names of enrolled students that did not actively register for the new semester. They will be contacted and asked if they are pursuing their studies - if not (dropout), they will be kindly asked the reasons for it. It is important to mention that each semester, individual student files are evaluated and in the case of students with academic difficulties, we are proposing solutions (spread the load over an additional semester, building a more adequate curriculum, help with applying for a fellowship to ease the financial burden).
We do not admit students on probation for undergraduate studies. We are not sure where this number arises from.
very selective. These numbers are perhaps reflected in the extremely high percentage of students who are admitted on probation (much higher than the CHE permits, i.e. 10\%). The data provided on this point were inconsistent with respect to the written description of "on probation" criteria. This discrepancy should be clarified and the percentage of admittance on probation should be lowered to match nationally required values. (p. 9)
20. The Evaluation Committee noted that Bar Ilan students would benefit by the development and implementation of a robust program to prepare students for their paths after graduation. Regarding career planning support, some possibilities that the Evaluation Committee suggests would be useful to include exposure at early stages to the merits of nonmedical, research-oriented careers in the life sciences, both within and outside academia. While ad hoc career planning is available to a limited extent for all students, the Committee strongly recommends a more formal approach to expose students to information about nonacademic life-sciences-related careers (biotech, agri-tech, science policy, patents, communication, teaching, etc.). For example, regular workshops and hiring personnel who can offer advice on non-PhD \& non-medical careers should be strongly considered. In

We thank the committee for bringing up this important point.
The faculty is currently devising a range of initiatives aimed at preparing their students for the workplace. One such initiative involves establishing partnership programs with industrial workplaces to foster collaboration and provide students with invaluable real-world experiences. These programs will include internships, co-op opportunities, and research projects, enabling students to apply their theoretical knowledge in practical settings and acquire essential skills. Additionally, the faculty intends to invite guest speakers from the industry to share their expertise, industry insights, and practical advice with students. These initiatives will provide students with a deeper understanding of workplace expectations and the current demands of the industry.

The university had a job fair recently and the faculty recommended that several relevant companies would participate, which they did. In addition, we have already started planning for a job fair for our students for next year. We have some initiatives that are already implemented for graduate students such as a newly developed course to provide students with soft-skills, career development meetings with our graduate student advisor, career-life balance workshops, and exposure to different types of careers.
By implementing these strategies, the faculty aims to equip our students with the necessary skills, networks, and industry exposure to enhance their employability and prepare them for successful careers in the life science sector
21. The alumni of the Faculty are another valuable resource to include in such career surveys and open days. The Faculty is encouraged to maintain close ties to their alumni for this and many other reasons. (p. 9)
22. The Committee noted that few PhD students pursue postdoctoral studies abroad. For some students interviewed and who were interested, family obligations precluded travel. To strengthen the program, the Committee supports the recently established initiative of mentoring families about the merits of international postdoctoral work. (p. 9)

We intend to generate a database of alumni in order to be in contact with them.
We do invite several alumni each year to a panel with students in which they describe the opportunities in the job market after graduation.
We are taking parallel approaches to increase the percentage of PhD students who pursue postdoctoral studies abroad, such as:

1. We initiated a workshop on balancing career with parenting.
2. Establishing a course that provides soft skills.
3. We plan to initiate a career development program to advise students how to overcome the obstacles associated with pursuing postdoctoral studies abroad.
4. We hold open days on preparing towards postdoctoral studies.
5. We hold open days on funding opportunities for postdoctoral studies.
6. The SER detailed the names of faculty members serving in the different committees but did not specify the exact responsibilities of each committee. Therefore, the current Life Sciences Evaluation Committee cannot comment on whether these fulfill Faculty needs. (p. 10)
7. It is the Committee's recommendation that the Institution find support to increase and stabilize lab manager positions, for example by increasing the percentage supported, and in

We provided an updated list of each committee and its responsibilities in the corrections requested from us prior to the committee's visit. Perhaps this did not reach the committee We now provide a separate file with this list.

To increase percentage of support provided would entail a heavy financial commitment of the university, given that there are at least 20

| addition providing bridge funds to faculty who <br> lose grant support. (p. 10) | such positions. For now, the university is unable <br> to commit itself to such additional funding. |
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|  | The faculty provides a number of bridge funds <br> per year to faculty members who would benefit <br> from this assistance at a point where they need <br> to generate data for grant resubmission etc. <br> There is an ad hoc committee that decides who <br> should receive the funds. |
| 25. The Committee recommends that BIU <br> develop a strategy to support the recruitment <br> and retention of highly qualified research staff <br> in the life sciences, especially for the <br> institution's core facilities. One model could be <br> to develop a new employee job category, such <br> as "Research Scientist." (p. 10) | Just recently the Israeli higher education <br> planning and funding committee (VATAT) has <br> initiated a pilot program for recruiting Staff <br> Research Scientists in Israeli Universities. The <br> faculty will learn this initiative and will discuss <br> with the university management how to utilize <br> this new position. |
| 26. The program might benefit by bringing in <br> more PhD students from other institutions <br> including from other countries. (p. 12) | We are working closely with the international <br> school to increase our visibility and admission <br> process for international students. We recently <br> hired a marketing expert to enhance our <br> international visibility. |
| 27. The faculty is virtually all native Israeli, most <br> with the customary postdoctoral training <br> overseas. No minority candidates applied for <br> faculty positions. This can be remedied by <br> specific outreach, as the effect of role models <br> on student development is well-documented. <br> (p. 13) | The faculty recognizes the importance of <br> diversity within its members. Indeed, there <br> have not been applications from minorities in <br> recent years, and in general Israeli academia <br> the pool of minority applicants is very low. We <br> will devise a plan to conduct specific outreach <br> as suggested. |
| 28. The Committee recommends that the <br> institution adopt a more pro- active approach <br> to dual hires. (p. 13) | The University strongly discourages the hiring <br> of spouses or other relatives in order to prevent <br> favoritism or conflict of interests, and to ensure <br> that promotion is based exclusively on |
| objective non-partial criteria. |  |

some cases). Students are also trained. Still, we agree that recruiting new personnel to provide research support for newly purchased equipment is highly important. We hope that the program of research associates recently introduced by VATAT will help recruit leading Israeli postdocs from abroad that return to Israel, and may provide one solution. In addition, the faculty will discuss with the university leadership the possibility of increasing the core facility personnel by at least 1-2 positions in the next 10 years. Finally, the Vice Dean for Infrastructure oversees all this operation in the faculty.
32. The Committee recommends that the University find ways to provide base funding support for infrastructure renewal for the Faculty of Life Science on a more predictable frequency, and that is separate from matching funds for grant application (p. 15-16)

|  | junior faculty. In addition, the faculty will <br> attempt to increase services provided to <br> outside users (mainly industry) and thus <br> increase income that can partially cover the <br> needed costs. |
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| 33. The Committee recommends that BIU, <br> along with other research-intensive <br> universities, strongly advocate for the Israeli <br> government to move away from equipment <br> grant competitions that are calls for specific <br> types of equipment, and instead focus on open <br> calls that are based solely on requirements of <br> researchers for excellence and innovation in <br> any field of life science. (p. 16) | The University will consider this. |
| 34. BIU should take concrete steps toward <br> improving the IT support across the Faculty. (p. <br> 16) | The faculty management will discuss with the <br> University IT support the training of available IT <br> staff to improve and provide adequate support. <br> Additionally, the faculty will inquire regarding <br> outsourcing of some services that may require |
| more substantial expertise. |  |


| Essential |  |
| :---: | :---: |
| 36. The Committee strongly recommends a shift for the graduate programs to be conducted in English, regarding both the language of instruction, discussions, and thesis writing. (p. 18) | As noted in the report, many of the courses on the graduate level are taught in English, and the faculty intends to gradually increase the number of such courses. Over the past few years, the faculty has introduced courses in English as per the request of the CHE for our undergraduate curriculum and most of the literature (e.g. textbooks, articles) is in English to maximize the exposure of our students to the scientific language. |
| 37. The Faculty should include teaching excellence in the evaluation for promotion of junior faculty. (p. 18) | We fully agree and will further emphasize this point to junior faculty members. <br> Teaching evaluations are seriously considered during the promotion process by the University Promotion committee. |
| 38. The University should secure funding allocated to the Dean on a yearly basis to allow equipment and service contracts to be purchased, and salaries of staff scientists to be paid, from sources other than external grant funding solely. (p. 19) | The faculty management will initiate discussion with university leadership, towards the development of next year's budget, to allocate yearly funding for purchase of equipment and service contracts. Part of the funding can come from different allocation of startup funds for junior faculty. In addition, the faculty will attempt to increase services provided to outside users (mainly industry) and thus increase income that can partially cover the needed costs. |
| Important |  |
| 39. The Faculty should put in place measures to increase diversity in the graduate student population. (p. 19) | We intend to discuss active means to increase diversity with the President's Advisor for Diversity, as well as learn from successful programs abroad. |
| 40. The institution and the Faculty should put in place measures to increase diversity at the faculty level - both regarding different underrepresented groups and increasing internationalization of the faculty. (p. 19) | The faculty recognizes the importance of diversity within its members. Indeed, there have not been applications from minorities in recent years, and in general Israeli academia the pool of applicants is very low. We will devise a plan to conduct specific outreach as suggested. |
| 41. The Faculty should review and provide peer-feedback on the teaching conducted by adjunct faculty in the Life Science courses. (p. 19) | We will encourage the adjunct faculty to participate in teaching workshops and will intensify the visits by members of the teaching committee to provide more feedback to faculty members. |
| 42. The Faculty should take measures to address drop out numbers for undergraduate students. Assessing the phenomena and distinguishing between the students who leave | Undergraduate: It seems that some of the firstyear chemistry courses are challenging for the students. We try to assist the students with group and private tutoring. |

to go to medical school, and those who truly are unable to finish the program, would require different remedial approaches. In addition, the Faculty should take measures to address drop out of graduate students by enhancing the rigor of 'admission on probation' to graduate programs. (p. 19)
43. The Faculty should provide students with information to broaden their career horizons beyond medical and academic goals. (p. 19)
44. The Institution should improve the IT support given to the Faculty, have Faculty-wide consistent support, and widen the selection of group-licenses for widely-used software (beyond Windows and Office). (p. 19)

Graduate: We are closely monitoring both MSc with thesis and PhD students, to intervene in time and minimize dropout. We are currently monitoring academic progress and submission of annual progress reports. As noted, there is no "admission on probation".
We are in the process of establishing courses for soft skills, presentation skills and integrating new courses taught by leaders from the industry. Students meet with alumni that present all different career paths. We are also thinking of a job fair.
The faculty management will discuss with the University IT support the training of available IT staff to improve and provide adequate support. Additionally, the faculty will inquire regarding outsourcing of some services that may require more substantial expertise.
A list of commonly used software's will be generated and together with the University IT support we will attempt to purchase institutional licenses.
Just recently the Israeli higher education planning and funding committee (VATAT) has initiated a pilot program for recruiting Staff Research Scientists in Israeli Universities. The faculty will learn this initiative and will discuss with the university management how to utilize this position.

## Desirable

46. The Committee strongly recommends that BIU actively participates in ongoing efforts to develop nation-wide core facilities and research equipment centers. BIU is well-positioned to play a leadership role in such planning. (p.19)

The faculty is already strongly involved in such an initiative. The Vice Dean of Research of the faculty is part of the steering academic committee of the IRCF (Israel research core facility) initiative. As such there are routine discussions with all major university core facility academic and administrative personnel as well as with leading governmental agencies:
Ministry of Science, VATAT, Research Authority etc. We strongly believe that the IRCF is the exact platform the begin and address this topic.
The faculty will advocate this to the university central library committee as well as to the VPR to discuss this at the Israeli University VPR forum.
It should be noted, however, that there is a very efficient inter-library loan system, whereby Bar Ilan researchers can receive in less

|  | that 24 hours publications that are found in any <br> of the other university libraries in Israel. |
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| 48. The Committee suggests the Institution to <br> establish an International Office' at the <br> Institutional level to enable recruitment of <br> appropriate foreign students. Help is required <br> at the evaluation steps and in the absorption <br> phase, both in technical matters and in bridging <br> between different cultures. | The university has an International Office <br> established a few years ago, and has made <br> much progress in streamlining the recruitment <br> of international students and in assisting the <br> everyday life and academic life of these <br> students during their time at BIU. <br> The faculty has an appointed faculty member <br> who is the liaison between the faculty and the <br> International office and she also has direct <br> contact with all the international students in <br> the faculty. |
| 49. The Committee proposes to keep a stronger <br> track of the transparency of quantitative <br> assessments and decision-making processes <br> within the Faculty and between the Faculty and <br> Higher Administration. | The faculty has increased transparency in <br> recent years regrading decision making process, <br> and this approach continues to grow. |
| 50. The Committee suggests taking measures to to <br> convince more graduate students to experience <br> a post-doctoral research period outside of <br> Israel. One option may be to offer some <br> collaborative short-term experiences. | We are taking parallel approaches to increase <br> the percentage of PhD students who pursue <br> postdoctoral studies abroad, such as: <br> 1. We initiated a workshop on balancing <br> career with parenting. |
| 2. Establishing a course that provides soft |  |
| skills. |  |

