Self Evaluation – Department of Computer Science –
Action Plan for Implementation of the Committee's Recommendations

Committee's recommendations (November 2014)	Action Plan Department's (D) response / University Administration (U) (January 2015)	Schedule (Month/Year)
Organizational Structure		
1. The University must develop a strategic plan to create a school encompassing the academic staff of the CS and IS departments, possibly including computer scientists from other departments too. Such a school would have a structure similar to that of the Hebrew University School of Computer Science and Engineering, where there are no departments, but multiple study programs. The school could be given a name such as "Computer and Information Science". **(Short term [~ within 1 year])**	**(D)** Plans are currently underway to incorporate the Department of Computer Science, the Department of Information Systems, a newly developed study program in Data Science and the Caesarea-Rothschild Institute under a single parent organizational unit. **(U)** Indeed, the University will shortly discuss these issues with the relevant departments and with the Dean, in order to consider the changes suggested by the Committee.	
2. The plan for such a school must address internal governance, development opportunities, and strategic plans for growth. **(Short term [~ within 1 year])**	**(D)** The charter of the proposed School is currently being negotiated. **(U)** See response to Recommendation 1.	
3. The department must create an industrial affiliate program and set up an industrial advisory board. In particular, the department must establish a stronger relationship with IBM Research. **(Short term [~ within 1 year])**	**(D)** The Department has appointed a faculty member to liaise with industrial partners. A program outlining Industry Partnership Opportunities has already been developed. The Department has reached out to potential partners such as IBM, Intel, Google, Elbit, Nice, Samsung, and others. Specifically, we have been fortunate enough to win three equipment grants from Intel this year. Several of our undergraduate final projects are supervised by industrial partners. An industrial advisory board will be set up during 2015.	
4. Within 3 years, the university must execute the strategic plan for establishing the new school. **(Intermediate term [~ within 2-3 years]).**	**(U)** See response to Recommendation 1.	
5. Within 4 years, the CHE should appoint a committee to ensure that the department comes into		

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compliance with CHE standards for the graduate and undergraduate programs. **(Medium term [~ within 4 years]).**		
Mission and Goals		
6. Computer Science must develop a strategic plan identifying the areas in which it plans to hire. **(Short term [~ within 1 year]).**	**(D)** Such a plan is dependent on the University Administration's agreement to develop a long-term hiring plan for the Department.	
Study Programs		
7. The university and the department must undertake a systematic effort to understand the undergraduate attrition problem, including the number of students who drop out of computer science across the length of the program, where they go, and their reasons for dropping out of the program. **(Short term [~ within 1 year]).**	**(D)** Several measures were taken to understand and address the problem of high drop-out rates. In cooperation with the National Institute for Testing and Evaluation, we developed questionnaires that are distributed to our students in order to better understand factors that contribute to their academic difficulties. These questionnaires have already been filled out by second year students, and will soon be completed by first year students. The collected data will be matched against academic records in order to identify correlations, and thus better predict student success chances. In order to help students cope with the challenges of academic studies, we teamed up with Social Finance, a non-profit organization. Together, we have developed an intervention program that will be set up in the next academic year, whose aim is to assist students in their first year of study. The program will address some of the main difficulties: poor preparation in mathematics; poor learning skills; low income; and insufficient command of Hebrew (and English). Additional measures include a pre-academic program ("*mekhina*") covering 5-point high school mathematics, which has been offered by the University specifically to CS candidates as of August 2014; and a scholarship program for excellent first year students that come from low-income families, generously funded by the Moshal Scholarship Program, which was inaugurated this year.	
8. The department must develop a plan to make practice sessions more effective. **(Short term [~ within 1 year]).**	**(D)** This requires a commitment by the University Administration to include practice sessions as an integral part of all CS courses.	
9. The department should develop a formal "research track" or "honors track" to attract outstanding undergraduate students to research programs, which will provide a pipeline for students to the graduate	**(D)** The University defines an expedited track for excellent undergraduate students, allowing students with a GPA of at least 90 in the first two years of studies to advance directly to a Master's program. Several of our students took advantage of this opportunity in the past.	

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programs. **(Short term [~ within 1 year]).**		
10. The university must ensure the department complies with rules concerning PhD theses advised by people external to the department or the university. **(Short term [~ within 1 year]).**	**(D)** Most current PhD students in the Department are advised by the Department's faculty members. One student is advised by a professor from the Department of Mathematics. Another exception, by special permission of the Dean of Graduate Studies, is a student advised by an Open University professor (since the Open University is not permitted to grant doctoral degrees). In the future, we will guarantee that all new PhD students are assigned a Department advisor.	
11. The department must incorporate experience with Linux into the study program. **(Short term [~ within 1 year]).**	**(D)** The course *Operating Systems* has been redesigned and will be based on Linux starting this year. The *Object-Oriented Programming* course has also been updated and will be more practical as of this year.	
12. The university must eliminate the wasteful duplication in Mathematics and Computer Science programs. **(Medium term [~ within 4 year]).**	**(U)** See response to Recommendation 1.	
Human Resources / Faculty		
13. The University must commit to keeping positions open until an appropriate hire can be made. **(Short term [~ within 1 year]).**	**(U)** The recruitment process at the University is based on the principle of academic excellence. When an appropriate candidate will be found for the Department, we will consider recruiting him or her.	
14. The department must make an effort to communicate clearly the expectations for promotion to its academic staff members at all levels. **(Short term [~ within 1 year]).**	**(D)** This is consistently done through a mentorship program whereby all untenured faculty are assigned a more senior mentor. Tenured faculty regularly discuss their career path with the Department Head.	
15. The department must ensure adequate supervision of course syllabi taught by adjuncts. **(Short term [~ within 1 year]).**	**(D)** The number of required courses taught by adjuncts is decreasing and will continue to decrease. We will appoint a Teaching Committee to supervise the academic quality of the remaining courses taught by adjuncts.	
16. The department must make a systematic and persistent effort to compete for European funding. **(Intermediate term [~ within 2-3 years]).**	**(D)** The Department already has one ERC grant and several smaller EU-funded research grants. The University's Research Authority EU-desk presented funding opportunities at our Department's meeting last year and will continue to promote such opportunities in the future.	
Students		
17. The department must develop clear rules about the funding of	**(D)** As of October 2014, we are offering full scholarships to excellent graduate candidates, on condition that they do not work outside the University. This year we recruited six such	

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graduate students and communicate these rules to the students. **(Short term [~ within 1 year]).**	Master's students. Graduate students who prefer to have an external job are not and will not be eligible.	
18. The university must establish a space for students to study after hours. **(Short term [~ within 1 year]).**	**(U)** We will be happy to implement this recommendation, depending on budget availability.	
Teaching and Learning		
19. The department should set in place a process to define and reflect on the attainment of outcomes in a planned, periodic manner. **(Short term [~ within 1 year]).**	**(D)** Department meetings are held regularly during the academic year, and these issues are regularly discussed.	
Infrastructure		
20. The University must establish a plan for the long-term sustainability of CRI. **(Short term [~ within 1 year]).**	**(U)** See response to Recommendation 1.	
21. The University must offer more space to graduate students. **(Short term [~ within 1 year]).**	**(U)** See response to Recommendation 18.	
22. The university must provide access to IEEE Computer Science digital library. This can be done either by subscription or pay-per-article arrangements. **(Short term [~ within 1 year]).**	**(U)** See response to Recommendation 18.	
23. The department should develop a virtual Linux desktop environment, with a rich supply of software tools, to make the Linux environment more usable to students. **(Short term [~ within 1 year]).**	**(D)** This is now available in our computer labs.	
24. The University must execute a plan for the long-term sustainability of CRI. **(Medium term [~ within 4 years]).**	**(U)** See response to Recommendation 1.	