Department of Information Systems
University of Maryland, Baltimore County
1000 Hilltop Circle, ITE 404
Baltimore, Maryland 21250

PHONE: 410-455-2620
FAX: 410-455-1531
VOICE/TTY: 410-455-3233
www.is.umbc.edu

Aryya Gangopadhyay, Ph.D.
Professor and Chair

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To: Antonio R. Moreira, Vice Provost for Academic Affairs

From: Aryya Gangopadhyay, Chair, IS department

Cc: Julia Ross, Dean, College of Engineering and IT

Subject: Third Year Report on Academic Program Review, Department of Information Systems

Introduction

The Information Systems (IS) department conducted its last Academic Program Review (APR) in 2011. Two external reviewers, Drs. Harry Bruce and David Hall submitted their final report in March 2011 after reviewing the department's APR document and subsequently meeting with faculty, staff, students and administration over a three-day period. The Dean of the College of Engineering and Information Technology submitted his final report in May 2011. The UGC report on the APR was submitted in February 2012.

This report discusses the progress made by the IS department since the last APR vis-à-vis recommendations made by the APR reviewers and subsequent comments and suggestions made through various meetings and reports.

Faculty size and composition

Tenure track faculty: At the time of the last APR the department had 23 tenure track faculty. Soon after the completion of the APR, two full professors including the then Chair of the department left UMBC. There were subsequent attritions of two tenure track Assistant Professors in Summer 2014. Furthermore there are planned retirements of two tenure track faculty members in June 2015 and January 2016 respectively. The IS department recruited two new Assistant Professors in each of the years 2013 and 2014. Three additional Assistant Professors will join the IS department from Fall 2015. With the new hires the size of the tenure track faculty at the beginning of Fall 2015 is expected to be 25 (9 Assistant Professors, 12 Associate Professors, and 4 Full Professors) with a net gain of 2 since the last APR.

Lecturers: At the time of the last APR there were 5 full-time lecturers in the IS department. In 2014 one new full-time lecturer was hired. A second new lecturer will join the IS department in Fall 2015. This will result in a net gain of 2 lecturers in the IS department. However, the lecturer position starting from Fall 2015 will be partially dedicated to a new course created for incoming freshmen in the Computing majors in the College.

New Program and Professor of the Practice: The IS department, in conjunction with the Division of Professional Studies (DPS) started a new MPS program in Health IT in Fall 2014. A new non-tenure track Professor of the Practice position was created and a new faculty member was hired in November 2014. The primary responsibility of the Professor of the Practice is to administer and teach in the MPS in Health IT program.

In summary, the total full-time faculty counts in the IS department will be 25 tenure track, 7 lecturers and 1 Professor of the Practice in Fall 2015. This represents modest progress vis-à-vis the 4-6 additional tenure track hires recommended by the APR reviewers. A noteworthy mention in this context is that the student size has grown considerably since the last APR as described below.

Student size

The APR reviewers mentioned in their report in 2011 that the student population in the IS department, consisting of 750 undergraduate, 300 MS, and 60 PhD students, rivaled or exceeded many of the 40 iSchools. The specific comparison with iSchools was due to the resemblance of the IS department with iSchools in terms of its multi-disciplinary nature and faculty research areas. This view is consistent with the department's conception of itself. By 2015 the student numbers in the IS department have grown to over 950 undergraduate, nearly 400 MS, and 77 PhD students. The growth in student numbers has significantly increased the student-to-faculty ratio, and the growth is expected to continue in the future. The high student-to-faculty ratio will require careful planning in order for the IS department to continue to provide quality education to its students and increase research productivity of the faculty.

Research and grant expenditure

The external reviewers identified low external funding as a weakness in the IS department. The Dean's recommendation in 2011 was to reach the grant expenditure of $1 million per year as the first step and move towards $100k/year per faculty subsequently. The grant expenditure in FY 2011 was just over $400k for the IS department. Since then the grant expenditure increased every year and the current year's expenditure is well over $1.1 million. While the increasing trend is encouraging, the IS department is still a long way from its target and low in comparison to iSchools at peer institutions.

Our strategy in the past few years has been to increase the number of faculty members in the IS department who are Principal Investigators (PI) on at least one externally funded project. The number of faculty members who are PIs on at least one externally funded grant has increased from 4-5 in 2011 to 15 in 2015. Currently 2 out of 4 Full Professors (one retiring on January 1, 2016), 10 out of 13 Associate Professors (one retiring in June 2015 and a second retirement pending approvals), and 3 out of 6 Assistant Professors are PIs on at least one externally funded project. None of the faculty members who are retiring have any external funding. It is expected that the

replacement hires will be active and successful in obtaining external funding. While this will help the IS department, the goal of $100k/year per faculty in the IS department is still a long shot. Below are some the strategies and issues related to the sustenance and growth of external funding in the IS department.

In order to move closer towards our goal we need to consider the faculty-to-student ratio. Both the faculty-to-student ratio and grant expenditure are about ¼ of that of many iSchools in our peer institutions. The resulting teaching load in the IS department is higher than in most iSchools, the default being 4 courses per year per tenure track faculty. Should the teaching load be lowered by at least one course per year the tenure track faculty can spend more time in their research pursuits.

The second issue related to growing external funding is the support infrastructure both at the pre- and post-award stages. Many grant-active faculty complain about long lead times required to apply for funding, difficulty in getting answers to questions about certain funding mechanisms from both federal and industry sources, getting appropriate credits for collaborative projects involving other units on campus, tracking expenditures, and lack of clarity on allowable expenditures.

A third issue is the inability to attract qualified PhD students in the IS and HCC programs. In many cases faculty members need get PhD students up to speed in terms of research methodologies and background in qualitative, quantitative, and technical areas. This has prompted some faculty members to hire postdocs instead of PhD students. However, this restricts faculty members to grow their externally funded research. It also makes it difficult for the department to encourage faculty members to support PhD students. If on the average each faculty can support at least two PhD students from external awards, it will enable the department to reach the goal of $100k/year per faculty and increase the number of PhD students in the department.

Department Organization and Structure

The APR reviewers recommended renaming the IS department to a School of Information, should it remain within the College of Engineering and IT. This issue has been discussed at length with faculty members in the department. Several challenges exist in such restructuring at the current time. First, it is unclear that there is consensus among all or the majority of the faculty in the department. Informal discussions with several members of the faculty indicate that there might not be a strong desire for such a major restructuring at this point. It is unclear as to what the department can achieve by being renamed as a School that it cannot achieve within the current structure. However, such renaming might make the IS department more recognizable in the iSchool caucus of which the IS department is a member.

A second issue identified by the APR was governance in the department. It recommended having an elected faculty council to advise the Chair on merit, P&T, teaching load, faculty renewals, budgeting, and strategic planning. However, the department already has an administrative structure that includes an Associate Chair for Academic Affairs, Graduate and Undergraduate Program Directors, nine standing faculty committees, and other ad hoc committees dealing with PhD admissions (all faculty are invited to participate), faculty search, P&T (consisting of all tenured faculty), and post-tenure reviews. All faculty members are informed on every aspect of the department including the appropriate level of details on budget and personnel actions. Since the last APR there has been no specific complaints or suggestions from any faculty member in

the department that indicate that there is a current need to make any changes in the governance structure of the department. The APR also recommended student involvement in the administration of the "school", perhaps meaning the department. None of the elected student groups in the IS department have indicated the need or desire to be more involved in departmental administration.

Conclusion

The reports subsequent to the Academic Program Review were reviewed and discussed at several meetings involving the Dean of the College of Engineering and IT, Provost, Vice Provost for Academic Affairs, and the Graduate School Dean. Subsequent feedbacks from campus-wide committees such as the APB and UGC were reviewed carefully. The APR report was discussed with the faculty in the IS department through a number of meetings and a full-day retreat. The IS department has made progress on the recommendations made in the last APR review, has plans in place to continue its progress, and improve the quality of research, teaching, and its operations through the strategic planning and alignment with the College of Engineering and IT.