

POST-APR ACTION PLAN

Post APR Meeting
11/16/2015

Attending: Philip Rous, Tony Moreira, Bill LaCourse, Janet Rutledge, Diane Lee, Rouben Rostamian, Karen Fedderly

Mathematics and Statistics				
RECOMMENDATION	ACTION			
	DEPT	CNMS	PROVOST	PLAN
1. (a) The creation of an Associate Chair position from the group that does not include the Chair. 1. (b) Establishing autonomy for the groups in specific areas as well as formal areas of cooperation. Besides graduate and undergraduate programs, areas that may be considered for autonomy may include hiring, promotion and tenure, and annual reviews. Areas of collaboration would include joint programs, as well as general administration of the department. These are a few examples, and we recognize that many other areas need to be considered. We recommend the creation of a departmental task force to develop a full proposal and a department meeting/retreat to arrive at a consensus.	✓	✓		Dept: The departmental bylaws (under preparation) addresses this issue. 1. (b) The issue of autonomy in specific areas will also be addressed in the departmental bylaws. Significant collaboration between the two programs already exists, for example, the REU program in high performance computing, CIRC, availability of cross-listed courses, and faculty teaching across disciplines. Dean: (a) The college allocates a total of 20% of base funding for the department chair to distribute to faculty for administrative support positions. (b) the college is expecting agreed upon bylaws to address the issue of autonomy. The college strongly encourages that math and statistics work together to the greatest extent possible and employ autonomy only under the most restricted and necessary of areas.
2. Communication and transparency in the department should be improved. Action items from departmental faculty meetings should be addressed in a timely manner. The bylaws should be completed and approved as soon as possible.	✓	✓		Dept: The departmental bylaws are in progress. Dean: The college is expecting agreed upon bylaws from the department by the end AY 15-16.
3. One issue of contention is the allocation of teaching assistantships to the two groups. We recommend that this should not be a fixed proportion of faculty size, rather a function of research areas of active faculty, availability of internships, track record of research groups in graduating students, external funding and placement, as well as the quality and interest of the applicant pool. This process should be overseen jointly by the area program directors with faculty input. The success of the students should be equal in importance to the success of faculty research programs.	✓			Dept: We will continue to allocate teaching assistantships as we have done in the past.
4. The courses to be taken by the graduate students that are in addition to the university requirements should be determined by the dissertation advisor. The practice of compelling students to take regular courses, independent of the relevance to their thesis areas, even after completing all PhD qualifying requirements, should be discontinued.	✓	✓		Dept: A majority of the department disagrees with this suggestion. We believe that in order to adequately meet the demands of the current job market, students need broad training in the discipline, rather than a training based on their narrow area of research. Our graduate program's consistent success in placing its alumni in highly select positions is a testimony to the effectiveness of this strategy. Dean: Further discussion is required. Under the guidance of the Dean of the Graduate School, the Dean of CNMS will work with the department to rectify this policy for all parties.
5. The department should explore ways to enhance the course offerings and availability to the top undergraduate majors and minors. The department should make the mentoring of these students a priority.	✓	✓		Dept: Under the current budget scenario, we are able to offer only our current offerings; we lack sufficient personnel to implement this suggestion. Dean: An independent assessment of the teaching capacity of the department is recommended. The results will be evaluated in comparison to other units in the college.
6. Tenure-line faculty should be involved and engaged in the teaching and oversight of the department's lower level courses.	✓			Dept: Curricular issues, including oversight of the department's lower level courses, are decided by the entire department. Beyond this, the teaching of lower level courses is resource driven, i.e., availability of personnel.
7. Various department initiatives should undergo complete reviews. Initial data that we were given indicate effectiveness of department's undergraduate initiatives, like Quiz Zero and Math Gym. If the initial conclusions are confirmed, the department, in collaboration with the college, should make plans to ensure their sustainability in a cost-effective manner. The impact of CIRC on graduate student education should also be evaluated.	✓	✓		Dept: The various departmental initiatives are indeed monitored, as time and resources permit, and their effectiveness is pointed out in the departmental self-study. For example, the effectiveness of CIRC in terms of providing opportunities for student development other than courses is emphasized in the self-study. Dean: Initiatives that increase student success are important to the college. Proven initiatives that are supported by the department are prioritized for support as resources allow.
8. Funding of graduate (PhD) teaching assistants from state funds should be limited to a maximum of X semesters. Our recommendation is X=10. This will incentivize students and supervisors to finish the PhD degree in a timely manner.	✓			Dept: The department is currently implementing this policy. Exceptions are made as appropriate. Average time to degree is about 5 years.

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9. There was a proposal from some faculty in the department to establish a teaching post-doc program. This is a model that is used successfully at other universities to boost teaching as well as research programs. Post-docs are typically fresh PhDs who teach a full load (or slightly reduced load) and are active in the research life of the department. They collaborate with research groups. A post-doc program with fixed term (three years, for instance) ensures the vibrancy of the program as well as the ability to spread the benefit among various groups. Efforts should be made to find funding for a small number of post-docs in collaboration with the college through salary savings or other means	✓	✓		<p>Dept: Such a program will clearly have a rejuvenating effect on the research faculty, and we agree with the Dean's comment on this.</p> <p>Dean: UMBC has established a <i>Post-doctoral Fellows for Faculty Diversity Program</i> of which the department has participated. More recently, an <i>Emergent Faculty Program</i> has been proposed by the college.</p>
10. There are concerns about space. The department should make a concrete proposal, with clear justification, of their space needs and have it ready for any opportunity for discussion with the higher administration.	✓	✓		<p>Dept: We are grateful to the Dean for his efforts to address this critical issue.</p> <p>Dean: The space needs, especially contiguous space, for the department are a priority for the college. A request has been submitted to the university's Space Management Committee for consideration and recommendation.</p>
11. The department, in collaboration with the college, should consider a system to reward highly productive research active faculty members (that involves something more than pay raises).	✓	✓		<p>Dept: a) Department has successfully pursued Presidential Research and Teaching awards, similar recognition for excellence at the University System level. b) Research active faculty naturally also tend to do more PhD student mentoring in addition to the normal teaching load. c) Department needs administrative support for grants management especially for those that involve a large number of faculty and student involvement (such as REUs).</p> <p>Dean: Rewards for highly productive research active faculty members range from undergraduate research awards (PIs only) to Sponsored Research Appointments to honors and awards from UMBC and USM.</p> <p>The majority of business functions have been assumed by the CNMS shared business center, the department has hired a department manager, which supports a new model for organizing academic units, and a third staff member has recently been hired.</p>

Reviewer Recommendations that will not have Action Items				
1. There should be greater consultation with other departments within the university to ensure that the Mathematics and Statistics Department is providing instruction, particularly at the undergraduate level, that is essential and appropriate for success in the "downstream" courses. This is especially true for calculus courses, which are essential for science, engineering, business and so forth, and effort should be made to improve learning outcomes and success rates in calculus.	✓			<p>Dept: The department has always followed this suggestion; we continually consult our client departments. Course coordinators are knowledgeable with the needs of the client departments. In particular, the redesign of courses, and the choice of textbooks, are made in consultation with the customer departments.</p>
2. A Mathematical Biology and Biostatistics initiative should be created that generates opportunities for consulting and collaborative research with scientists in the medical school. This will exploit the unique strengths of the department and involve both mathematicians and statisticians in a joint venture. It will also provide opportunities for graduate students to be involved in real-world research problems. The possibility of establishing a professional certificate program in areas related to mathematical biology and biostatistics should be assessed. This initiative has the potential for revenue enhancement. If successful, new external funding could be a basis to turn this initiative into a center.	✓	✓		<p>Dept: The Department's interaction with the medical school has been ongoing. We offer a Biostatistics program (at the MS as well as the PhD levels) in collaboration with UMB's School of Medicine. The Biostatistics PhD program has helped the department in keeping up the Statistics PhD production. Dr. Yi Huang, one of our statistics faculty, is also an Affiliated Assistant Professor at the Department of Preventive Medicine and Epidemiology, engaged in consulting as well as collaborative research. In 2014, Dr. Kathleen Hoffman and Dr. Brad Peercy were awarded two seed grants with the express purpose of fostering collaborations with the medical school. Naturally such collaborations are bound to have impact in the graduate program's teaching and research.</p> <p>Dean: Review of proposals and initiatives to expand the reputation and reach of the college and UMBC are always welcome. Presently, all professional masters programs are administered by the college.</p>
3. In keeping with the national trend, the department relies critically on a cadre of instructors in the undergraduate program, particularly the lower level courses including calculus. Recent lecturer hires have PhD degrees, and all lecturers who seem to be very dedicated. Some lecturers are the best teachers in the department. Efforts should be made to make sure that they are properly integrated into the department's mission. Lecturers should not be involved in teaching graduate courses, and should only teach upper division undergraduate courses in special circumstances. Tenure-line faculty should be involved in all of the departmental teaching-related service activities that currently very heavily rely on lecturers, such as advising, curriculum development and review of teaching.	✓			<p>Dept: The current policies and practices of the department are consistent with this suggestion; see also our response to item #6.</p>