Progress Report
For the External Evaluation
Of the Master of Science
in
Applied Statistics

August 28, 2017

I. In May 2015 the Master of Science in Applied Statistics Program was reviewed by three external Ph.D. statisticians. Those individuals were Dr. Alix Gitelman, Dr. Dan Sass, and Dr. Arthur Yeh. Contact information for the reviewers is supplied in the attached report.

Generally the report was very positive about the contribution of AST to NMSU, and the quality of the masters program given the very limited resources. This progress report will summarize the efforts of AST to answer and remedy the points made in the external evaluation.

II. The AST unit has created a proposal to overhaul the M.S. curriculum. This proposal was discussed and vetted by the entire department (Econ/AST/ Int. Business) on August 14, 2017. This overhaul is partly in response to the curriculum suggestions from the external review team.

III. An AST faculty member has created a course entitled ‘Predictive Analytics’ which will cover topics from the very relevant data analytics area. The creation of a course in Data Analytics is another suggestion offered by the review team. The topics covered in this course are reflective of topics covered in a Predictive Analytics program at the Miami University of Ohio.

IV. Response to ‘1. Recommendations for Moving Forward’

A. The reviewers recommended that the University create and support a Center for Quantitative Analysis. A proposal for this Center was developed in September of 2014, but was not considered by upper administration due to budget cuts despite offering a solution for funding the center. The solution proposed was funding could come through overhead from grants and contracts (because CQE activities
are a collaborative research mechanism and acts in a similar manner as the library in supporting disciplines all across campus), or from a small percentage of each college’s budget (because some activities are supporting graduate student learning), or a combination thereof. The AST unit would be happy to run such a unit if the resources were available. Currently we have two college track faculty, and 4.4 tenure track faculty on our roster.

B. The reviewers recommended that two new faculty lines be added to the AST roster.

Again, we would be happy to fulfill this recommendation if the resources were available.

The reviewers added “While we recognize and appreciate that resources are tight at NMSU, we believe that strengthening this program is essential to the reputation of the University as an R-I research institution”. Every AST faculty member has made significant contributions to research being conducted across campus. This includes the acquisition and execution of externally funded grants, masters and PhD student research projects, as well as research conducted by staff and faculty without graduate student involvement.

C. The reviewers reported a “tension” between the research interests of some AST faculty members and the mission of the College of Business. Discussion of this issue in the last two years has improved the College’s appreciation of the diverse research interests of some AST faculty, and in a reciprocal fashion, AST members are becoming more involved in the mission of the College. As recommended in the review, the Business College will be hiring a business analytics position to upgrade current curriculum content, but this is unrelated to the need for more statisticians servicing the broader university.

V. Response to “2. Questions provided by NMSU”

1.(i) AST has created a Predictive Analytics course which will expose PhD and masters students in the college and other colleges to the basic principles in this area. This course comes at a cost of not teaching an AST 311 section as the AST faculty are already teaching a 15 credit hour load each year. We have the expertise to offer a Bayesian course (Dr. Charlotte Gard), but cannot replace the courses she is already covering to allow for it to be taught.

1.(ii) A section of our current curriculum overhaul addresses the consolidation of the three consulting classes into one 3-credit class to be taught in their last semester. A syllabus has been developed for this class and the change was approved by the department this fall. It would be very instructional for our AST masters students to work in the previously mentioned Center for Quantitative Analysis to get real hands-on experience, but that Center has not been established.

1.(iii) ‘offer a SAS certificate’. We have not addressed this point, but some of our students have already earned SAS certification (after taking our classes).
2. The essence of this item is—what changes could be made to better integrate the AST program into the other programs in the COB?

AST faculty continue to make efforts to be involved in the COB. Two AST faculty members have taught in the Bootcamp for the Cohort based MBA (3 years now). AST faculty have served on COB committees, one example begins strategic planning. If an additional position was awarded to AST, they would be able to teach the quantitative class (MGT 512) within the MBA program which would further integrate AST within the college.

The third part of this item returns to the idea of a Center of Quantitative Analysis, which would be a welcome addition to NMSU and the COB if AST had more faculty resources.

3. The essence of this item—‘IF’ AST offered a Data Analytics degree, which courses would be needed for a viable program.

We have created a new graduate course (already mentioned) entitled Predictive Analytics which is a first step in addressing any coverage of the Data Analytics realm.

Again, we do not have the personnel at this time to create an entirely new degree track.

4. The statement was made that the current masters program cannot continue without additional faculty, which is an accurate statement. The reviewers then state that additional faculty would allow AST to have a greater emphasis in data analytics and reduce the extremely high consulting commitment by current members.

5. Recent curriculum changes were made to address this item.

6. The reviewers listed the core of the curriculum that needs to be maintained if any modifications are made to the curriculum. These courses remained in the core of the recently approved change.

7. Expanded undergraduate offerings could attract additional students, but without additional personnel are not possible.

8. The reviewers again suggested reviving the Center for Quantitative Analysis, a recurring theme with the reviewers.

The remaining portion of the review report describes the strengths and weaknesses of the program and reiterates the need for additional faculty lines and a Center for Quantitative Analysis.