Statistics BS and MS Program Review: Provost

Comments:

The Program Review notebooks were thorough and well-organized, which is much appreciated. However, different from most of the other Program Review notebooks provided, the material in the primary notebook followed the Provost's instructions for the self-evaluation, giving this a much more detailed treatment than the other departments and focusing almost exclusively on the instructional role of the department, rather than its contributions in research or service (except for service courses). The Accreditation notebook was not quite up-to-date (2004), but contained information on faculty research and service.

The BS in Statistics has had an enrollment of only one or two students during the review period. However, during most of those years, there was also one graduate, supporting the statement in the Program Review notebook that baccalaureate students usually declare this major very late. The degree yield ratio (average headcount/average annual degrees) for the BS is about 0.66, well above the median for CNSM and CLA baccalaureate programs (see attachment). While the enrollment is small, the cost of this program is negligible since all of the courses (even at the 400 level) serve many students from other majors and have healthy enrollments as a result. Perhaps the best strategy (already pursued) for this degree is to encourage students in other fields to pursue double majors and double degrees including Statistics.

The MS in Statistics also has a small enrollment, averaging about 8 students since its inception in 2002. The degree yield ratio (see definition above) is about 0.33, again above the median for CNSM and CLA Master's programs and consistent with very good retention and short average time-to-degree, e.g., 80% and 2.5 years, respectively.

The cost/SCH for DMS (this was not calculated separately for Statistics) is in the lower part of the range for CNSM. In part, this reflects the use of Instructors and adjuncts to teach some lower division Mathematics service courses.

Student learning outcomes assessment presented in the Program Review notebook is adequate, although data collection (or at least, preservation) has been spotty. The assessment plan requires an 'omnibus' examination (never done), an SAS portfolio (evaluated and found to be satisfactory), a senior project with oral presentation (collected and found to be generally well-done), and an exit/alumni survey (some were collected but lost). Actually the SAS portfolio and project evaluations would be sufficient assessment and probably the department should focus on evaluating those. The assessment plan should be revised to include only the assessment that can be consistently done. Assessment of the MS is mainly based upon evaluation of programming skills in core classes, the written comprehensive examination, the research project, an exit survey, and employment/education success of alumni. A few elements of the plan are not being implemented (e.g., evaluation of performance in the consulting class) and should be dropped from the plan if they are not going to be used. Performance on the

comprehensive examination and the project has been good, and the exit/alumni surveys indicate that the students are very satisfied with their program and are successful in finding related employment.

Overall the MS in Statistics is serving its modest number of students well, and since the program's courses generally have substantial enrollments including students from a wide variety of other fields, it is cost-effective. In addition to encouraging some of the graduate students in other fields to pursue a concurrent Master's in Statistics (which has been done by several recent students) DMS might consider offering a Graduate Certificate in statistics, requiring (e.g.)12-15 credits. This will give the department another countable product and offer students in other fields a credential that will probably be useful for certain kinds of employment. Certificate credits can be double-counted, so students might prefer this option to a double degree.

Recommendation: Continue with change.

Continue to implement Student Learning Outcomes Assessment, with attention to making implementation entirely consistent with the assessment plan.

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