

**Graduate Program Review Appeals Committee**  
**Informational Session: June 26, 2006**

**Statistics Ph.D.**

**Program representatives:** Alexander Enyedi (associate dean), Joseph McKean (professor), Daniel P. Mihalko (professor and chair), Gerald Sievers (professor), Michael R. Stoline (professor)

**Program's Appeal Summary**

1. Provost's committee presents no reasoning tying the goals of the GPR to the decisions made—specifically to the elimination of the Doctoral program in Statistics.
2. All of the Provost's team's comment contain errors or demonstrate confusions between programs.
3. The Doctoral program makes a net profit of at least \$300,000 for the university.
4. Elimination would require the hiring of two to three new faculty to cover the teaching load now carried by our students.
5. All goals of the strategic plan of the university and all the criteria of the GPR are strongly satisfied by our Doctoral program in Statistics. Specifically:
  - Statistics is a STEM subject.
  - Our Doctoral program is highly interdisciplinary.
  - Our Doctoral program is unique in Michigan in its applied (and thus interdisciplinary) focus.
  - Average of 2 to 3 graduates per graduate faculty member which is better than Purdue or U of M.
  - Total of 33 graduates since inception of the program in 1986.
  - Total of 17 graduates since inception of the Department in 2001.
  - One of the oldest doctoral programs at the university.
  - One hundred percent placement of graduates at major universities and companies.
  - Historically, nearly 50% of the students in this program have been female.
  - Provides economical statistical services to the university and industries of Southwest Michigan.
  - Provides statistical partnerships in statistical design and analyses to those writing funding proposals.
  - Is the only resource for instructors qualified to teach large numbers of students in many sections of introductory statistics courses.
  - Quote from review team "...any university committed to research and extramural support must have excellent training and consulting in statistics."

**Committee's Questions \***

1. Imagining a worst-case scenario in which you received no new resources, no new or replacement faculty hires, experienced reduced support for TAs, and had to self-fund 100 percent of your growth, what would your program look like three to five years from now?

It would look much the same. Remove the TA funding and the faculty would still be there. There'd just be less research work (five or six students in the lab are supported by grants and contracts) and fewer introductory statistics courses (half of our introductory courses are taught by TAs). We'd need more faculty assistance, in other words, and we'd keep going but with fewer students.
2. If you had to hire more faculty because of a loss of TA funding, what kind of availability is there in terms of part-timers?

We used to have a source of part-time faculty when Upjohn was here, but not anymore. It's not a subject that a retired high school teacher could teach—we need people who've done some consulting and really know the applications of their statistics knowledge.

3. How many graduate courses are available for master's and Ph.D. students in the same classroom?  
We offer a couple of 600-level courses per semester, of which around two are taken by both groups. Only a handful are just for Ph.D.s. Because these are applied courses, however, we try to offer them to both Ph.D. and master's students after the first year.
4. Please tell us some more about the history of the Ph.D., as well as the rationale behind it.  
It began life as a Ph.D. in Mathematics with a specialization in statistics, becoming a standalone Statistics Ph.D. in 1989. It's a data science, then, and although it uses math as a tool, it doesn't have the same mission as mathematics. The rationale for keeping the Ph.D. is that the need and demand for statistics has grown in the last 20 years. It used to be that doctors' testimonials were enough for a drug to be approved. Now there has to be statistical evidence. We are graduating students who go to work in very applied areas. The specific job description is a Ph.D. in Statistics or Biostatistics.
5. Would you get fewer applicants if statistics went back to being a concentration rather than a standalone Ph.D.?  
Yes. There are many more statistics departments in the country these days. Graduates would have to go through a whole rigmarole to show that their concentration was statistics.
6. You refer to the positive impact on your program of Upjohn, Pharmacia, and Pfizer. Surely the loss of Pfizer is a blow?  
Loss of internships was mentioned in the documentation from the provost's office. But they were confusing the statistics program with the biostatistics program, which did represent a great partnership between Upjohn and WMU. We miss those folks, but the fact is that we have as many internships now as we did before that built-in internship program went away.
7. The provost's office also characterized the Ph.D. as a very specialized program.  
We looked at those comments, trying to figure out some logic behind them. Perhaps they didn't understand what a STEM program is.
8. To what extent are graduate-level courses in statistics being taken by students from other disciplines?  
Lots of engineering students take them. Our 500-level courses are always full. There are also a number of College of Education students taking our categorical analysis course.
9. How many of your statistics master's students stay on at WMU for the Ph.D.?  
About 30 percent [subsequently corrected via e-mail to 70 percent].

\* *Q&A text is not verbatim*