Minutes  
Faculty Meeting, Department of Mathematics and Statistics  
Feb. 20, 2009

Present: Fant, Denny, Young, P. Tintera, G. Tintera, Zimmer, Giraldo, Guardiola, M. Abudiab, Sterba-Boatwright

1. Approval of minutes from Jan. 13, 2009  
   There was a Motion to approve minutes from Dr. George Tintera. Motion approved.

2. WEAVE-  
   Core: Chair stated that assessments that need to be redone are 1314, 1324, 1442 math courses. Chair will remind the faculty members that are responsible for these course assessments.

   B.S. in Math: issues identified-  
   a. Performance on MFT–median TAMU-CC performance has been below the national median for the past two years  
      Faculty identified four possible causes for the recent decline in scores:  
      • Random year-to-year fluctuation in students  
      • Lack of incentive and hence lack of effort by students taking the test  
      • Low standards and/or retaining as majors some very weak students  
      • Flaws in teaching/curriculum  
      Faculty agreed on the following responses:  
      • Analysis of MFT results vis-à-vis course grades to see if any relationships emerge. The Chair will do this by May 31.  
      • Higher expectations in MATH 3313 (already implemented informally by several faculty). The Upper Division Undergraduate Oversight Committee will formalize this by May 1.  
      • Comparing notes with other Departments using the MFT or other nationally normed tests to see if they had incentives we could adopt. The Chair will do this by May 1.  
      • Implementation of an improved mentoring system. The Chair will do this by September 1, 2009.

   b. Performance in Capstone courses—students are not performing at a satisfactory level in modeling and writing, as measured by a Departmental rubric based on end-of-semester projects in the Capstone (MATH 4385) course.  
      Faculty identified two potential causes:  
      • Mismeasurement—the projects used represent projects for one course more than they do capstone projects
• Lack of time and attention to modeling and writing in the Major curriculum

Faculty discussed a number of solutions. Dr. Diane Denny has already modified to the syllabus in MATH 4385/5378 to partially address the modeling concerns; we will monitor future results to see if this helps. Increased one-on-one mentoring of majors was rejected due to inadequate faculty time. Additions to the syllabi for some courses would have to be balanced by deleting material, and there isn’t really any fluff. Projects aren’t feasible with some courses due to large enrollments (e.g. MATH 3342). A number of faculty have writing components in their courses, but all tend to be shorter writing assignments (from a paragraph to 1 or 2 pages) that don’t prepare students for extensive writing. With the State’s limits on degree plans, we can’t add any more courses (e.g., Technical Writing) without deleting some. The only course of action agreed on was:

• Faculty will look for appropriate places in the upper division curriculum to mentor and assess students in modeling and writing. The Chair will lead this discussion, to take place by the end of the Spring semester.

M.S.-Issues Identified

a. Math Content in Curriculum Content track—students are not demonstrating adequate mathematical knowledge, as measured by our current Departmental rubric

Faculty in the Curriculum Content track have identified this as a measurement problem, involving both the rubric and potentially the time and place of measurement. The solution agreed upon is:

• The rubric has been re-drafted, and will be reviewed by the Department’s Graduate Committee this semester for implementation as soon as possible.

b. Modeling Skills in both tracks—our planned measurements are not generating useful data (or any data)

Existing measurements are dependent on courses that are either not offered regularly, or attract very low enrollments; or, on survey data that is coming up empty for graduated M.S. students in Math. There was some discussion about whether or not this skill was measurable in a realistic fashion, but there were no suggestions at this time that this goal be replaced. Therefore, faculty agreed that:

• The graduate program in both tracks will be re-examined for better opportunities to assess Modeling skills. This will be completed by the Department’s Graduate Committee by the end of this semester.
c. Communication skills—M.S. students falling short of targets on one measure, student surveys of TA performance in labs

The Chair noted that other measures of communication skills in our M.S. students had been generally positive, and that this measurement was fairly positive but did not meet our targeted levels. Faculty discussed whether the student survey of TA’s was the appropriate measure of oral communication of these students. Some faculty preferred observing the TA’s as they work in the labs, others preferred more sharply defined questions on the student surveys. Faculty agreed on the following two responses:

- Questions on the student survey of TA’s will be revised to include questions directly focused on oral communication skills. The Chair revise these questions in time to be used for TA assessments in the Summer 2009 semester.
- Department faculty will compile of list of graduate course assignments requiring oral presentations that can serve as additional opportunities to assess the oral communication skills of our M.S. students. The Graduate Committee will compile this list by the end of the semester.

d. Scholarship in Statistics and K-12 Math Education—need for increased research by faculty.

Faculty agreed upon the following measures:

- Additional faculty needed to be hired in Statistics and K-12 Math Education.

Meeting Adjourned at 10:52 am.