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Faculty Member's Statement

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TEACHING

In the spring of 2007 I taught two sections of Calculus I. In the fall of 2007 I taught one section of Calculus I. I limited myself to a single prep in order to devote extra time to my new duties as department chair.

As a formative assessment of teaching, I asked all the faculty to perform the following exercise and part of their personal statement:

1. Read your long answer evaluations from Fall 07.
2. Write a very short description of what, if anything, you learned reading them.
3. Include a description of what, if anything, you might do as a result of whatever you learned . Here's what I came up with for my Fall 07 calculus class.

I did this myself and published my results for the faculty by way of example.

I had 20 evaluation forms returned with written comments. The dominant theme in the positive comments was that explanations were clear and expressed in simple language.

There were two significant themes in the negative comments. Foremost was the long turnaround time on graded homework and exams. This has turned up in the negative comments in many other semesters and I have been working on this issue for some time. I felt that I had been making progress, but last fall was particularly difficult from a time management perspective. In

retrospect, I assigned more graded work than I could realistically handle given my expanded administrative duties. This spring I will have to reduce the amount of carefully graded homework.

The other negative theme was less consistently expressed, but perhaps more telling: several students disliked the fact that I used vocabulary that did not match what they had been taught elsewhere. I suspect part of this comes from attempts to use "simple language", and that part of it comes from my reliance on intuitive rather than technical definitions. I do not plan to make immediate changes towards more technical language, since I want to preserve the positive aspects of explaining things in lay terms. Instead, I will keep an eye on this issue, try to be more precise even in use of lay terms, and perhaps focus a little more time and assessment on vocabulary and definitions.

RESEARCH/CREATIVE ACTIVITY

In the spring of 2007 I served as associate chair of my department. In the fall I became chair. Math department policy and precedent are to give a one course reduction to the associate chair and a two course reduction to the chair. However, I am the first person to serve in either capacity and also carry a research assignment. As a researcher I have always had a two-two course load. If I were to follow department policy, I would have had one course as associate chair and none as chair.

I abandoned this policy in favor of a personal workload assignment of 8 teaching units (two courses), 20 service units (dept policy for the chair under the new workload scheme), and 2 research units. Essentially I am treating myself as a non-researching faculty member. As such, my research plans in topology are now on hold for the duration of my service as chair.

I am instead involved in a project to research the effect of using electronic delivery and assessment of homework in precalculus classes. This is a joint project with Engineering. Investigators in 2007 included myself, Janet Callahan, and Joanna Guild. Results have been written up and the abstract was accepted for presentation at the the Annual Conference of the American Society for Engineering Education. The paper itself was submitted to the peer

reviewed conference proceedings. (It was also accepted, but not until Feb 2008). Formally:

Articles Submitted for Publication

J. Callahan, S.Y. Chyung, J. Guild, W. Clement, J. Guarino, **D. Bullock**, C. Schrader, *Enhancing Precalculus Curricula with E-Learning: Implementation and Assessment*, ASEE Annual Conference & Expo, Pittsburgh, PA AC 2008-1703 (2008).

This project is ongoing and I expect it will generate more publications in the future.

PROFESSIONALLY-RELATED SERVICE

A list of activities is included below. I have not broken out the duties of assoc. chair or chair.

- Calculus Committee (chair, through spring 2007).
- Science Competition Day Committee.
- Core Curriculum Committee.
- Executive Budget Committee.
- Associate Chair, Math Department, Jan 2007–Aug 2007.
- Chair, Math Department, Aug 2007–.