

**Minutes**  
**Mathematical Sciences Faculty Meeting**  
**April 19, 2011**

Present: Eisenbarth, Hoffman, Klingler, Lin, Locke, Long, Magliveras, Meyerowitz, Niederhausen, Schmidmeier, Schonbek, Steinwandt, Wang, Yiu, Zhang.

Lee Klingler announced that the seven people mentioned in last week's meeting will all get three-year contracts, but some will get one next year, in effect a four-year contract.

Rainer Steinwandt reported the changes in preliminary exams as set forth in a printout. The main effect would be a one-part instead of a two-part prelim. A grad student has two years to qualifying exams, and two years after admission to candidacy for prelims. H-O proposed that prelims be oral if desired. Rainer said that would be allowed under the new rules. The faculty voted unanimously to accept the changes in prelims.

Tomas Schonbek remarked that students are getting into Modern Analysis and Modern Algebra without knowing how to write a proof. The undergraduate committee proposed making Introductory Number Theory into a proof-writing course and requiring it as a prerequisite for Modern Analysis, Modern Algebra, and Mathematical Problem Solving. H-O agreed that a proof-writing course would be a good idea. Students often don't realize there can be more than one good proof of a theorem. Fred Hoffman thought that would be a good course to replace Problem Solving.

It was objected that community colleges already offer bachelor's degrees with weak number theory courses, and there would be little to prevent students from taking the course at the community college. It was pointed out that we do try to introduce proofs in Discrete Math. Fred said that an honors Differential Equations course requiring Calculus 2 and Discrete Math would be good, but it was remarked that proofs are not taught in Differential Equations. Markus claimed that students take easy courses at community colleges and then have trouble in Modern Analysis and Modern Algebra. In his Problem Solving course, students are motivated but find it difficult to write rigorous proofs. He maintained that, in an advanced Number Theory course, they would have practice composing routine elementary proofs.

Yuandan is teaching Discrete Math and stated that students can't seem to write proofs in whole sentences. Markus agreed that MAD 2104 students need a lot of feedback on the proofs they write. H-O said proofs in different areas have different flavors. He suggested a course in which we do proofs from different fields of mathematics. Spyros agreed and added that our math majors should learn proofs from the beginning; he proposed offering honors sections of calculus. It was pointed out that, in the past, honors sections of calculus have not attracted enough students to avoid being cancelled. It was maintained that a low-level proof-writing course would enable students to benefit more from 4000-level courses.

There was no consensus on the proposal, and Lee proposed that we send this issue back to committee.

We have two lists of questions about strategic planning: one from the university and one from the college. Lee asked for volunteers to send him replies to questions. Then he will write something official.