

Education Goals at the University of New Mexico

Below is a list of goals which we are currently attempting to achieve at the University of New Mexico in order to strengthen the quality of education which our math majors receive and also in order to *attract* more majors.

1. Many of our students enter the university with insufficient mathematical training and so the first step toward improving the success of our students is to help secondary teachers to be more successful in the classroom. There are currently programs both in the southern part of the state and in Albuquerque which offer instruction to secondary school teachers, often times in the summer but also occasionally during the regular school year. There have been some very positive outcomes from these programs and our hope is that these beneficial effects will continue to grow as the programs gain in maturity.
2. Last summer we ran a week long program designed to introduce eager high school students to abstract mathematical thinking. We largely covered ideas from basic number theory: it was very challenging for the students but they learned an immense amount. We are currently looking for a stable source of funding for this program. Given that it is directed at some of the most talented students in the state, we certainly hope to encourage some of them to become math majors in college.
3. We are currently revising our undergraduate requirements for all math majors. With limited faculty, we would like to encourage both pure and applied math majors to take many of the same courses (calculus, introduction to proofs, linear algebra, advanced calculus, complex analysis, and differential equations). In this way, our students will share a common experience and be able to learn from one another. Moreover, they will have greater flexibility for career options upon graduation and this is critical since the majority of our students will not go on to graduate school.
4. We are beginning an honors calculus class next year which will cover the basic material of a first year calculus course with a much greater emphasis on understanding concepts. Thus the students will be exposed to proofs from year one. This will give us a fighting chance to recruit some of the best students at the university into mathematics: without this course, the best students simply receive credit for calculus and take little or no mathematics at the university.