

GRADUATE PROGRAMS IN MATHEMATICS EDUCATION

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Today there are 13 resident graduate students studying in the areas of mathematics education in Alberta and probably as many students from Alberta pursuing advanced degrees beyond the boundaries of the province. It becomes very obvious that as more experimenting with curriculum and instruction takes place, the need for teachers to improve their ability to understand and evaluate the new ideas becomes greater. Below are presented some statistics and comments on the graduate programs in mathematics education at the University of Alberta, University of Calgary, and a representative American university.

University of Alberta

Elementary mathematics program for a Master's degree: basically five courses and a thesis are required to be taken in one year of residence and a summer school. No students enrolled this past year.

Secondary mathematics program for a Master's degree: requirements are basically the same as above, but more emphasis is placed on mathematics. Two students are currently enrolled.

Doctoral programs are offered by both departments, the residence requirement being two years, in general. Currently there are six doctoral candidates in secondary mathematics education.

University of Calgary

A notable difference between this program and the program of its Northern counterpart: there is only one department at Calgary. The program basically comprises six courses and a thesis for a Master's degree. Four students are enrolled in the program.

At both universities in Alberta, the courses are selected from the three areas of mathematics, curriculum and instruction, and statistics, with perhaps additional emphasis on psychology or other foundational

areas. The following three thesis topics indicate the interests of the students in these programs:

1. A Comparison of Three Alberta Matriculation Math Programs
2. The Use of Intuition in Teaching Mathematics
3. Student Self-Concept and Achievement in Mathematics

University of Colorado at Boulder

The Master's program consists of 30 semester hours plus a comprehensive examination. A thesis not being required at the Master's level is the major difference between this and the Alberta programs. Also a year of residence is not mandatory at Colorado.

The doctoral program at Colorado is similar to that offered at the University of Alberta, requiring 40 semester hours of courses (more than 50 percent of these are in mathematics) and a thesis. One difference is the 24-hour written comprehensive examination in areas of sociological foundations, psychological foundations, educative experience, mathematics, mathematics education. A total of 10 students are currently enrolled in this program.

Persons studying toward advanced degrees in the United States often cite the following advantages:

- The organization of courses into semester hours provides for a broader selection of courses and professors.
- Exposure to American education exposes one to a different set of educational traditions, forcing a re-examination of Canadian procedures.
- Greater opportunities to study at summer schools often allow the student to complete a program while spending only one year in residence.

It is important to become informed about various programs at the different universities if you plan to study for one or two years. This requires only a five-cent postage stamp.