

**SIMON FRASER UNIVERSITY
SUMMER SESSION 2007**

**EDUC 475-4
DESIGNS FOR LEARNING: ELEMENTARY
MATHEMATICS**

D06.00

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**TUESDAY & THURSDAY 1:00-4:50 PM EDB 8620F
June 25-August 3**

PREREQUISITE: EDUC 401/402

DESCRIPTION

The B.C. Math curriculum has seen significant change in the curriculum and the approach to teaching mathematics. The course is designed to explore different approaches to learning mathematical concepts as well as ways of using manipulatives and technology to enhance learning and examining the students' own learning of mathematical concepts. At the end of the course it is hoped that the students will be more confident with their own mathematical knowledge, their abilities to teach and explore mathematics with their students and plan their instructions using ideas and concepts based on the latest research.

OUTLINE OF TOPICS

- Theories of mathematics learning
- Measurement
- Number and number operations
- Estimation and mental computation
- Data analysis
- Problem solving
- Arithmetic operations
- Geometry
- Technology
- Evaluation
- Historical topics

Assignments and evaluations

Students will be expected to attend all classes, and to participate fully in class work and discussions. Specific details will be discussed during first session. Expected assignments are:

- a problem-solving assignment in which students keep a journal to record their efforts over a period of time
- a presentation to the class demonstrating an idea, activity, or technique for teaching mathematics
- a lesson using technology

Text

Van de Walle, John A. Elementary & Middle School Mathematics: Teaching Developmentally,

Canadian edition. New York: Longman