

**SIMON FRASER UNIVERSITY
SUMMER (Intersession) 2007**

**EDUC 475-4
DESIGNS FOR LEARNING: ELEMENTARY MATHEMATICS
D07.00
(Fort St. John)**

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May 8 - June 14, 2007
Tuesday & Thursday 4:00-8:00 PM

PREREQUISITE: EDUC 401/402

COURSE DESCRIPTION

Course Description: Focuses on teaching elementary school mathematics. Students explore mathematical learning and their own mathematical instruction within a curriculum, and then plan mathematical instruction within a consistent framework using appropriate instructional materials and methods.

Required Resources

Elementary and Middle School Mathematics: Teaching Developmentally. John A Van De Walle and Sandra Folk. (2005) Pearson. Canadian Edition.

Prerequisite:

Overarching Understanding

If students are to develop deep understandings about mathematical principles, then we as teachers must teach mathematics in a way that supports this learning.

Essential Understandings

- Mathematics instruction in a classroom today should not mirror what it was in a classroom 10 or more years ago in either content or process.
- You as a teacher must have clear goals for the students in your math class (such as those that line up with the NCTM standards) and actively pursue these in your instruction, your modeling, etc.
- There needs to be a shift in the mathematics classroom environment so students can become mathematically empowered.

Essential Questions

- What are the content and process standards that should be in place in a classroom? How will I ensure that these are a part of my mathematics teaching?
- What goals should I hold for my students? How will I support and scaffold learning so these goals are achieved?
- What are the characteristics that make up a classroom environment that empowers students mathematically? How will I ensure that I am teaching in this empowering way (and not fall back to the default mode in which I was taught mathematics)?

Requirements

Students are expected to attend and participate in all classes, to plan math lessons based on the inquiry method of teaching, to reflect on concepts introduced in the course, to teach one lesson in class, and to write a final exam.

Evaluation

Planning a series of three lessons (15%)

Portfolio relating to math concepts (40%)

Teaching a mini-lesson to peers (15%)

Final exam (25%)

Professionalism, as related to the class (15%)