2008-3

SIMON FRASER UNIVERSITY
THINKING OF THE WORLD

EDUCATION 846
Foundations of Mathematics Education
(Enroll # 9458)

Fall Semester 2008		Instructor:	Dr. Irene Percival
Meeting Dates:	Sept. 12,13,14 Oct. 3,4,5 Oct. 17,18,19 Nov. 21, 22, 23	Office:	
Times:	Fridays: 5:00 pm – 9:00 pm Saturdays: 8:30 am – 3:30 pm Sundays: 8:30 am – 12:30 pm	Telephone:	604-299-5430
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ACADEMIC HONESTY AND STUDENT CONDUCT

Plagiarism, whether intentional or unintentional, is a form of academic dishonesty that can lead to a failing grade for the course and to suspension from the University. As defined in SFU policy (http://www.sfu.ca/policies/teaching/t10-02.htm) "plagiarism is a form of academic dishonesty in which an individual submits or presents the work of another person as his or her own." Plagiarism involves taking the words, ideas, or research of another without properly acknowledging the original author. Students need to become familiar with the many different forms that plagiarism can take, including accidental and intentional plagiarism. For more information, see http://www.sfu.ca/policies/teaching/t10-03.htm or http://learningcommons.sfu.ca/hot_topics/academic_integrity.php or the section entitled Academic Honesty and Student Conduct in the General Regulations of the SFU Calendar.

Le plagiat, intentionnel ou non intentionnel, est une forme de malhonnêté académique qui expose à des sanctions, comme l'ajournement à un examen ou l'exclusion de l'université. L'université de SFU (http://www.sfu.ca/policies/teaching/t10-02.htm) définit le plagiat comme "une forme de malhonnêté académique où un individu soumet ou présente le travail d'autrui comme étant le sien". Le plagiat signifie s'approprier les mots, les idées et la recherche d'autrui sans mention d'emprunt à l'auteur initial. Les étudiants doivent se familiariser avec les différentes formes de plagiat, intentionnel ou non intentionnel. Pour plus d'informations, se référer aux documents en ligne suivants:
http://www.sfu.ca/policies/teaching/t10-03.htm ou
http://learningcommons.sfu.ca/hot_topics/academic_integrity.php ou la section intitulée *Academic Honesty and Student Conduct in the General Regulations* du Calendrier de SFU.

COURSE RATIONALE

Exploring the teaching practices of the past helps teachers see present pedagogy in a new light. Investigating new approaches to teaching mathematics will increase teachers' ability to vary their teaching to best engage students of all ability levels and interests.

DESCRIPTION

This course will look at the history of the school mathematics curriculum in relation to the history of mathematics itself, the ways in which it has been taught and the rationale behind the particular methods used. Current approaches to mathematics, designed to make the subject more relevant to students' interests and the world in which they live, will also be explored.

GOALS AND LEARNING OUTCOMES

To gain an increased understanding for modern practices of teaching mathematics.

REQUIRED TEXTS

Supplementary material will be given out on a regular basis.

COURSE OVERVIEW

Students will be expected to read assigned papers for each week's class. In addition they will have four assignments to complete (more details to be provided in the first class).

(1) Work in pairs to research the life and work of a mathematician, present your findings to the class in "talk-show" format, and teach a related activity.

(2) Design and present a "Mathematical Lens" activity to the class.

(3) Select TWO of the following criteria, and for each, design a lesson to "humanize" a specified math curriculum topic of your choice.

   a) Lesson shows how mathematics relates to some "non-mathematical" activity that interests you (or your students) – sports, music, art, cooking, gardening, etc.

   b) Lesson uses a "multicultural" or historical approach to mathematics curriculum material.

   c) Lesson illustrates the connection between mathematics and another curriculum area.

   d) Lesson is based on a children's story.

(4) Portfolio

GRADING

Assignment weightings

(1) Famous mathematician	30 %
(2) "Mathematical Lens"	20 %
(3) "Humanizing Math" lesson	20 % each
(4) Portfolio	10%