SIMON FRASER UNIVERSITY
SUMMER SESSION 2008

EDUC 415-4
DESIGNS FOR LEARNING: READING
(E100)

Dr. Calin A. Lucus

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TUESDAY 5:30-9:20
EDB 7600F

PREREQUISITE: Educ 401/402.

DESCRIPTION:
This course is designed mainly for prospective secondary school teachers who wish to explore the learning/teaching process as it applies to secondary school mathematics.

The objective of the course is to enhance the confidence and competence of course participants in planning and implementing instruction in the secondary school mathematics classroom while working within a consistent framework and using various materials and methods. The course will also familiarize students with a few topics of the British Columbia high school mathematics curriculum.

Participants will explore both theoretical and practical aspects of mathematics teaching and learning including topics such as the role of problem solving, the role of written work, assessment and evaluation, the use of instructional resources and tools such as calculators, software, manipulatives, and the internet. Participants will also investigate and reflect upon issues such as enrichment vs. acceleration, enrichment mathematics programs vs. regular mathematics programs. Students will reflect on their own mathematical thinking and learning through problem solving and extensions of the curriculum.

REQUIREMENTS:
Students will be expected to attend all classes, and to participate fully in class work and discussions and complete a number of assignments. Specific details will be discussed during first session. Assignments may include the following:
* problem-solving assignments & construction of a "problem set" to take to your classroom
* presentation of solutions to problem-solving assignments & problem set
* a presentation to the class demonstrating an idea, activity, or technique for teaching mathematics
* written discussion points (to be explained further on day one) on selected journal, web and textbook material
* a project of particular interest and/or relevance to the student, as negotiated with the instructor
* midterm examination

REQUIRED TEXTS & RESOURCES
Posamentier, A.S., Smith, B., & Stepelman, J. (2006).
Teaching Secondary Mathematics: Techniques and Enrichment Units (7th ed.). Prentice Hall. Upper Saddle River, NJ. ISBN: 0131185209

*British Columbia Ministry of Education (2006). Mathematics 8 and 9: Curriculum support materials.

(Available at http://www.bced.gov.bc.ca/irp/program_delivery/math89.htm)

*British Columbia Ministry of Education (2006). Mathematics 10 to 12: Curriculum support materials. (Available at http://www.bced.gov.bc.ca/irp/program_delivery/math1012.htm)

Graphing calculator recommended.

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*it is not necessary to print these out in their entirety!

Students in all Faculty of Education courses are encouraged to review policies pertaining to academic integrity available on the Undergraduate Programs website:
http://www.educ.sfu.ca/ugradprogs/student_resources/index.html