SIMON FRASER UNIVERSITY
SUMMER SEMESTER 2008

EDUC 313-3
NUMERACY AND SOCIETY
(D300)

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Tuesday 8:30-12:20 EDB 8620B
The course will be conducted in ten 4-hour sessions.
Specific dates will be announced by the instructor on the first day.
May 5 – August 5

PREREQUISITE: EDUC 401/402.

CREDIT
EDUC 313 course is designed to satisfy the "Q" requirement for teachers in humanities. This course is designed for students NOT working in a Mathematics or Science specialization. As such, students with sufficient credit to receive a minor in Mathematics, Physics, Biology or Chemistry WILL NOT receive credit for this course.

DESCRIPTION
The rationale for this course is threefold: (a) to examine the evolving conceptions of numeracy in contemporary society and the consequences of innumeracy, (b) to reflect on personal experiences as a learner enhancing numeracy skills, and (c) to examine how numeracy can be enhanced in different aspects of curriculum in general and in the humanities in particular.

Numeracy can be referred to as 'mathematics in action'. It is a response to the growing number of high school graduates who, although well educated, are not able to apply the mathematics they have learned to real life problem solving situations. Numeracy is not a curriculum item. It is not a chapter in a text book. Numeracy is a disposition – an ability and a willingness to apply and communicate mathematical knowledge and procedures in novel and meaningful situations (often found in society). Development of this disposition cannot be restricted to mathematical classroom alone. It is a cross-curriculum agenda, similar to social justice or anti-racism.

Development of numeracy skills is heavily dependent on the experiences one has. This course will provide numeracy-rich experiences to its students through their immersion in a problem-solving environment in which they explore numeracy in society and come to experience the wonders of mathematical discovery.

OUTLINE OF TOPICS
- Conceptions of numeracy, relevance of numeracy in the humanities, relationship between numeracy

and literacy, relationship between numeracy and mathematics
- Numbers and number systems: a historical journey through different societies
- Problem solving: Connecting the tools of mathematics to the "real" world
- How to inform with statistics
- Beyond numbers: Mathematics in Art
- Humans as patterning animals
- Numeracy around us – examination of examples from newspapers, movies, flyers etc.
- Innumeracy and its consequences

ASSIGNMENTS AND ASSESSMENT

Attendance and participation in all class activities and discussions	Compulsory
Homework assignments (3-4, 10-15% each) The assignments will involve: • engagement with examples from the readings • problem solving • completion of a problem solving log (journal) in which they will detail the process by which they go about solving an assigned problem, analyze their personal problem solving experiences, and link (where applicable) their experience to the research literature • creating a numeracy enhanced lesson in an individual subject area	45%
(In)Numeracy around us – portfolio of artefacts	15%
Final project (as negotiated with the instructor)	40%

REQUIRED TEXT

Paulos, J. A. (1988). Innumeracy: Mathematical illiteracy and its consequences. New York: Hill & Wang. ISBN: 0809058405

ADDITIONAL READINGS

Additional readings will be provided by the instructor.

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