

SU DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE  
 SYLLABUS (*Tentative*)  
 MATH 501 *Number Theory from a Multicultural and Historical Perspective*

- Intended for:** Teachers of middle-school mathematics
- Objectives:** To strengthen the background of teachers in number sense, number and operations, and number systems. The historical context of the mathematical content will be explored, as well as cultural contributions. Exposure to the mathematics from various cultures will be included. This course is aligned with the NCTM standards for number and operations. Thus, the course will contain group projects, cooperative learning, written reports, oral presentations, and reaction papers to bring about PUFM (Profound Understanding of Fundamental Mathematics).
- Textbook:** Course materials developed by instructor in consultation with supervisors and teachers.
- Technology:** Calculators and the computer are used to explore mathematical topics.
- Pre-requisite:** Admission to graduate study (Students do not need to be admitted to a particular graduate program.)

<i>Topics</i>	<i>Weeks</i>
<i>Introduction to Number Systems</i>	1.0
<i>Natural Numbers</i>	3.0
<i>Integers</i>	3.0
<i>Rational Numbers</i>	4.0
<i>Real Numbers</i>	3.0

### EVALUATION

Homework, computer activities/ written assignments, class participation	1/3
Projects, papers, portfolios, revised lesson plans	1/3
Final group project, portfolio, or take-home exam	1/3

**Note:** The Writing Across the Curriculum Program is supported strongly in this course. To communicate mathematical ideas effectively, in oral speech and in written work, is a major goal of the course.