

MTHT 49I**Number Theory****Topics in Teaching Elementary/Junior High Mathematics****28947****Instructor:** Bonnie Saunders, 622 SEO, saunders@math.uic.edu, (312) 413-1417**Class times and location:** Monday 5:00 PM - 8:00 PM 600 SEO**Office Hours:** Before and after class and by appointment.**Description:**

This problem-based course presents classical topics of elementary number theory and how they pertain to teaching elementary and junior high school mathematics. Topics include prime numbers, GCF, LCM, division algorithm, Euclidean algorithm and the extended Euclidean algorithm. Several applications, including cryptography, will be presented using middle grade materials. The course prepares the teacher for using the CryptoClub materials with middle grade students.

Required:

The Cryptoclub: Using Mathematics to Make and Break Secret Codes by Janet Beissinger and Vera Pless.

Workbook for The Cryptoclub: Using Mathematics to Make and Break Secret Codes by Janet Beissinger and Vera Pless. You may download this for free from the A.K. Peters website.

TI-83/84 or TI-83/84 Plus or equivalent graphing calculator.

Grades:

Grades are based on three aspects of your work:

- 20% CryptoClub Workbook and CryptoQuizes.
- 20% Problem Portfolio.
- 20% Presentation and Teaching Application.
- 20% Midterm, TBA
- 20% Final, December 7

Class Attendance:

Class attendance is required. Absences will result in grade reduction.