COURSE SYLLABUS

CLASS HOURS: TuWThF: 2:00-4:00PM, Wickersham 218 (CRN 1738)
INSTRUCTOR: Dr. Zhigang Han
OFFICE: Wickersham 216
OFFICE HOURS: TuWThF 1:30-2:00PM
OFFICE PHONE: (717) 871-7310
EMAIL ADDRESS: Zhigang.Han@millersville.edu

Textbook: *Elementary Number Theory*, 6th edition, by Kenneth Rosen

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Grading: You can see your grades on D2L (**Assessment** / **Grades**). Coursework will be weighted as follows:

Problem sets	Projects	Test 1	Test 2	Final exam
20%	10%	20%	20%	30%

Course Description and Objectives: Math 693 is an introduction to the theory of numbers. Upon successful completion of this course, the student will be able to:

1. Demonstrate an understanding of the elementary arithmetic properties of the integers, including divisibility, congruences, modular arithmetic, and the Fundamental Theorem of Arithmetic.

2. Solve some Diophantine equations, congruences, and systems of congruences.

3. Demonstrate an understanding of fundamental results in elementary number theory, including the Euclidean algorithm, Wilson's theorem, Fermat's theorem, and Euler's theorem, the Chinese Remainder Theorem, quadratic residues, quadratic reciprocity, and continued fractions.

4. Apply number theory to areas such as calendars, computer science, and cryptography.

5. Write proofs in the context of elementary number theory.

Attendance: Attendance is required if you are healthy.

D2L: All course documents will be posted on D2L (**Resource**