Math 365
Elementary Number Theory
2011-2012 Autumn Semester

Textbook: David M.Burton, Elementary Number Theory,McGraw Hill,Boston, 4th Edition

References: Any Elementary Number Theory book

Instructor and
Office Hour: Ebru Solak, Wednesday   14.40- 16.30

Lectures   Monday : 13:40-15:30,   M-103
                Wednesday: 13:40-14:30 ,   M-103

Tentative Course Outline:

Week	Topics	Sections
1	The Division Algorithm, The Greatest Common Divisor	2.1,2.2
2	The Euclidean Algorithm, The Diophantine Equation	2.3, 2.4
3	The Fundamental Theorem of Arithmetic, Primes and Their Distribution	3.1, 3.2
4	Basic Properties of Congruences, Linear Congruences	4.2, 4.4
5	Chinese Remainder Theorem	
6	Fermat's and Wilson's Theorem	5.2, 5.4
7	Number-Theoretic Functions	6.1
8	The Möbius Inversion Formula	6.2
9	The Greatest Integer Function	6.3
10	Euler's Phi Function, Euler'Theorem	7.2, 7.3
11	Properties of Phi-Function	7.4
12	Primitive Roots	8.1, 8.2
13	The Quadratic Reciprocity Law	9.1, 9.2
14	The Quadratic Reciprocity Law	9.3

Grading: There will be two midterm exams each of weight 30% and a final exam of weight 40%. One make-up exam will be offered after the final exam for those who have (for a good reason) missed an earlier exam

Exam Dates:

First Midterm: 2   November, 2011, at 17.40
Second Midterm: 14 December, 2011, at 17.40
Final: ?