



Code	Subject Title	Cr. Hrs	Semester
MATH-206	Elementary Number Theory	2	IV
Year	Discipline		
2	Mathematics-I,II		

Prime Numbers

- The sieve of eratostheness
- Perfect numbers, Mersenne primes, Fermat numbers
- Theorems related to prime numbers

Divisibility

- Divisibility of primes
- Divisibility of primes
- The Euclidean algorithm, The equation $ax + by = c$

Congruences

- Divisibility tests
- Linear congruences, Techniques for solving $ax = b \pmod{m}$
- The Chinese remainder theorem
- Finding the day of the week

Recommended Books

1. Adler, Andrew, Coury, John E. *The Theory of Numbers*, Jones and Bartlett Publishers, Boston, 1995.
2. Kenneth, H. Rosen, *Elementary Number Theory and Its Applications* Pearson Addison Wesley Publishers, Boston, 2005
3. Tom M, Apostol, *Introduction to Analytic Number*, Springer, New York, 1980.
4. Burton, D.M. *Elementary Number Theory* McGraw Hill, 2000.