Topics covered in Spring 2016

Trace and norm; Cyclotomic polynomials and extensions; Integral extension; Noether Normalization; Going up theorems; Hilbert Nullstellensatz; Krull dimension; Krull's principal ideal theorem; Discrete valuations and rings; Ramification index; Dedekind domains; Associated primes; Projective and Injective modules; Derivations; Tensor products, symmetric and exterior products; Some homological algebra; Flat modules; Elementary Linear Algebra.