

Syllabus of Modern Algebra II

KEY INFORMATION	<div>Instructor: You Qi Time: Every Tue, Thu 1:00–2:15 pm Office: 404 DL, 10 Hillhouse Office Hour: Tue, Thu 10:30–11:30 am</div> <div>Tel: (203) 432-6859 Venue: 431 DL, 10 Hillhouse E-mail: you.qi@yale.edu</div> <div>Course webpage: http://math.yale.edu/~yq64/spring2016381.</div>
COURSE DESCRIPTION	This course is aimed at giving a gentle introduction to noncommutative algebra. We aim to illustrate basic principles of abstract algebra via representation theory of some finite groups and finite-dimensional Lie algebras.
TEXTBOOKS	<div>(1) J. P. Serre, <i>Linear Representations of Finite Groups</i>, GTM 42, Springer.</div> <div>(2) W. Fulton and J. Harris, <i>Representation Theory, A First Course</i>, GTM 129, Springer.</div> <div>(3) J. Humphreys, <i>Introduction to Lie Algebras and Representation Theory</i>, GTM 9, Springer.</div>
PREREQUISITES	Basic undergraduate level abstract algebra, commutative algebra as in the first part of the course, some familiarity with finite groups, character theory will be assumed (see the first two chapters of (1)).
GRADING	<div>There will be a few homeworks assigned every several weeks when we finish a topic.</div> <ul style="list-style-type: none">• Homeworks, 10 %• Midterm, 40 %• Final, 50 %