SYLLABUS FOR MATH 7261 ALGEBRAIC THEORY I, FALL TERM 2019

Instructor: Associate Professor Dr. David J. Grynkiewicz
University email: djgrynkw
Office: Dunn Hall 367
Office Hours: MW 12:30 – 14:00 and by appointment
Website: www.diambri.org/AlgI

Class Meeting Times: MWF   11:30 – 12:25
Room: Dunn Hall 231
Final: Monday 12/09/2019   10:30 – 12:30

Textbook: *Abstract Algebra* by Dummitt and Foote, 3rd Edition, and some supplementary material.

Course Summary: This is the 1st part of a demanding course designed to introduce Ph.D students to the beginnings of higher level abstract algebra. The course should help prepare students for the Ph.D qualifying exam in Algebra at the university of Memphis. Students who find themselves struggling should seek aid, form fellow students or during office hours, early on. Topics covered will be Groups and Rings. A solid background in undergraduate group theory is assumed. We will do a short review of basic group theory early on, but will quickly move on to more advanced material beginning with Group Actions and the like. The second half of the course is devoted to Rings, but no prior background for rings is assumed here.

Grading Scheme: Grades will be based upon Homework Average (20%), a mid-term (30%) and a Final Exam (50%). Homework will be assigned every one to two weeks. Students may discuss the homework problems with other students, but each student must write up the solution independently in their own words. Simply transcribing someone else's solution can have serious consequences.