Group Theory

Mathematics 3120B, Section 001, Western University

Winter 2013-2014

Time and place: Mondays 6:00-7:30 p.m. and Thursdays 1:30-3:00 p.m. in MC 107.

Instructor: Farzad Fathizadeh, ffathiz@uwo.ca, MC 113, ext. 86009

Textbook: *A First Course in Abstract Algebra,* 7th Edition by John B. Fraleigh

Course description: This course presents basic facts concerning abstract algebraic notions and methods in group theory. This theory is influential in abstract algebra and has applications, among others, in geometry, number theory, and physics. In particular it provides a mathematical tool for studying symmetries. The notion of a group covers a wide range of mathematical objects, and understanding the structure of different types of groups and their representations is an important task in mathematics; there have been great achievements in this direction. In this introductory course, after giving the basic definitions and important examples, we shall study the group theory in a general abstract manner, which is organized as in the syllabus below.

Syllabus: Groups, Subgroups, Permutations, Cosets and direct products, Fundamental theorem of finitely generated abelian groups, Homomorphisms and factor groups, Sylow theorems, Group presentations.

Grading scheme:

- Three assignments 10% each

- One midterm 30%

- Final exam 40%

Course website: Here is a link:
http://www.math.uwo.ca/ ffathiza/Courses/GroupTheory/group.html