

**Math 496A**  
**Topics in Algebra: Matrix Groups**  
SPRING 2007

**Instructor:** Dr. Jae-Hyouk Lee, Cupples I (207A), 5-4208, email: jhlee@math.wustl.edu

**Time and Location:** Lopata Hall 103 T-Th 2:30 PM-4:00 PM

**Office Hours:** M-W- 3:00PM-4:00PM

**Text book:** *Matrix Groups, An introduction to Lie Group Theory*, Andrew Baker. (Springer Undergraduate Mathematics Series)

**Further References :** *Matrix Groups*, Morton L. Curtis

**Material:** Matrix groups are the most common examples of Lie groups which have been appreciated by mathematicians and physicists in various research areas. This course provides an introduction to Lie group theory accessible to undergraduate students. Topics include matrix groups, tangent spaces and exponential map, Clifford algebras and spinors, Lie groups and Lie algebras, maximal tori.

**Grading:** There will be about 5 assignments, and students who register are expected to deliver a short presentation. The topics of presentations are up to the students but a list of recommended topics is also available. They will count toward the grade as follows.

Assignments	50%
Presentation	50%