Math 7290 Fall 2016

Lie Theory P. Achar

Course Information

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Textbook. For most of the semester, we will work from the following book:

• G. Malle and D. Testerman, *Linear algebraic groups and finite groups of Lie type*, Cambridge Studies in Advanced Mathematics, no. 133, Cambridge University Press, Cambridge, 2011.

At various points, I may supplement this with notes from other sources.

Course outline. We will aim to cover most of Chapters 1–15 (roughly one chapter per week). The three main goals for the semester are:

- Structure theory of reductive groups
- Classification of reductive groups
- Classification of irreducible representations of a reductive group

Homework & Grading. Problem sets will be due approximately once every week or two. Each problem set will consist of about 3–5 problems. The letter grade will be based on the number of problem sets submitted with substantial work, and the +/- designation will be based on the number of correct solutions.

- A Substantial work on at least 80% of the problem sets
- B Substantial work on at least 50% of the problem sets + At least 90% correct solutions
- C Substantial work on at least 20% of the problem sets neutral At least 50% correct solutions
- D Less than 20% of the problem sets submitted Less than 50% correct solutions
- F No work submitted

Under normal circumstances, I expect everyone to earn at least an 'A'. If you feel that you are getting behind, please come see me as soon as possible.

Exams. There will be no timed exams. In lieu of a final exam, the last homework assignment will be due at the scheduled time for the final exam: Thursday, December 8, 3:00pm.