MATH 3140: Abstract Algebra 1

MWF 2:00-2:50 pm, ECCR 108

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Office hours: Tuesday 3-4 pm, Wednesday 10-11 am, Friday 10-11 am
Course website: `http://math.colorado.edu/~mayr/teaching.html`

Course description. Algebra appears in the study of symmetries of objects, construction of computer chips, cryptography .... After a brief overview of various algebraic structures we will study the elementary theory of groups. In particular we will cover the following topics:

- algebraic structures (rings, groups,...)
- products of groups
- finitely generated abelian groups
- symmetry groups
- group actions
- Sylow subgroups

Assignments. Every Wednesday I will post homework problems on the website. Please hand in solutions at the beginning of class on the following Wednesday or send a pdf at least 30 minutes before class. Please use "Math 3140 - assignment n" as title for the mail for the n-th assignment (otherwise I will not find and grade it).

You are allowed and encouraged to discuss your assignments with others. However I ask you to follow this approach: First try to solve your problem on your own. If you get seriously stuck, discuss it with your colleagues, me, etc. In any case write up the solutions that you hand in alone.

There is a short quiz every Monday, 2 midterm exams in class on Monday, September 19 and on Wednesday, October 26 as well as a final exam on December TBD.

Cheating on your assignments may result in a grade of 0. Please find the honor code of CU Boulder here `http://honorcode.colorado.edu/`

Grading. Your final grade will be determined by the scores of your homework, quizzes, midterms, and final exam. To combine these items the following weights will be used:

Homework: 30%
Quizzes: 20%
Midterms: 25%
Final exam: 25%

The 3 lowest homework scores and the 3 lowest quiz scores will not count towards the final grade.

Texts. Frederick M. Goodman. Algebra: Abstract and Concrete (Edition 2.6, 2015). Available for free:
`http://homepage.math.uiowa.edu/~goodman/algebrabook.dir/download.htm`

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