

Syllabus
UTK – M351 – Algebra I
Spring 2004, Jochen Denzler, MWF 10:10–11:00, Ayres 111

Textbook: McCoy, Janusz: Introduction to Abstract Algebra — We will cover a fair part of the book, but I will not cling to it slavishly.

Course contents: Integers, congruences modulo an integer, and a bit of elementary number theory; some basic group theory; some basic ring theory; polynomial rings. — The order of the material beyond integers is not strictly determined by logical or didactical necessity, and I'll decide on this order when I know you better.

251 (or 257) and 300 are prerequisites for this course. Only a bit of their material enters, but that bit is needed. If you need to review some 251 material and have sold the textbook already, you'll find 251 notes on my webpage. They are *not* easy reading and not meant to be, but quite appropriate for review. From 300, you'll need the general mathematical maturity.

Philosophy: In case of doubt, I'll cover less material in more depth rather than a lot of material too superficially. I do not assign gazillions of cloned problems for training ad nauseam, but will require you to think about the homework problems. My teaching decisions are guided by the (fictitious) scenario that you have another final half a year after the course is finished, with my salary depending on how well you still remember the most important points of the course. *Anything* feasible is negotiable subject to this purpose.

This is why I do usually NOT give an extensive review before in-class exams. This would encourage bulimic learning strategies. You must strive to assemble the material in your brain as a coherent and meaningful entity, not as a bag of of single facts. That's more rewarding and prepares you better, and you'll need to relearn less before the comprehensive final.

The lecture itself will constantly review things by connecting material into a coherent panorama. It will give you roadmaps for the hwk, but not guide you through it like a GPS.

Homework: You may find some hwk difficult and still end up with an A. That's a feature, not a bug. I am available for questions in the office and actually encourage office visits. The clearest indicator for imminent poor grades is if you try to poke around in the dark or write down things that you couldn't explain if I asked you 'why?' or 'what does it mean?' — Seen too many folks do it, which is why I am adamant and dogmatic on this issue.

Each hwk will be graded with either 0, 1 or 2 points unless specified otherwise. Some hwk may be organized as ping-pong: you hand in an honest attempt, I return it with a hint or helpful question, you amend or improve or retry, with the final score being determined when you claim to have a definite solution. That means you may get help for free; if you confidently (or negligently) turn in gobbledeegook you get 0 right away, but if you display uncertainty and ask a question, you'll be better off.

Office hours: In order to cope with a weakness in time management, I intend to reserve Thursdays for research. Otherwise, I do accomodate drop-in whenever possible, and you may also schedule appointments. Immediately before class is usually a bad time.

I try hard to take as much time for you as is needed. But do come with specific questions or attempts (even failed attempts are fine) at a problem. Regular office hours will be posted later. My office is **Ayres 317 E, phone 4-5325**. Email is denzler@math.utk.edu, but I may not read it for half a day or for an entire weekend. My website is <http://www.math.utk.edu/~denzler>.

Grade: We'll have two in-class exams and one final exam. The relative weight will be: 1/6 for each in-class exam, 2/6 each for hwk and final; or else 1/5 for each in-class exam and the hwk, and 2/5 for the final, whichever works out better for each individual. If I do not get a grader, I may need to re-assess this formula.