

Announcements

Instructor: K. Baker, MS 5360; tel. 825-1947; email baker

Office hours: Mon 1-2, Wed 2-3, Thu 2:30-3:30; also by appointment. But I'm often available informally; feel free to drop by. Exceptions: I'll be away January 14-17.

Prerequisites: Math 210A. Some point-set topology will be helpful at times, but you won't need more than can be gained from a few pages of reading; ask me if you want explanations.

Texts: None required. Several good ones will be on reserve in the Science and Engineering Library:

1. Birkhoff, *Lattice Theory*, 3rd. ed.
2. Burris and Sankappanavar, *A course in universal algebra* (free; see our course home page www.math.ucla.edu/~baker/222a)
3. Davey and Priestley, *Introduction to Lattices and Order*
4. Grätzer, *General Lattice Theory*, 2nd ed.
5. Grätzer, *Universal Algebra*
6. McKenzie, McNulty, Taylor, *Algebras, Lattices, Varieties*

Homework: A mixture of easy and more challenging problems will be assigned, generally weekly. Feel free to ask me for suggestions on problems when you need them. If you use some source for a solution from time to time, that's OK, but do give credit. Likewise, if you get an essential idea from someone else, please give credit.

As in all graduate work, try for the right degree of succinctness and elegance. For easy problems, give briefer answers!

People who think they might want to do further studies in this field should take a proactive approach, by finding nice solutions to some of the harder problems and by looking at material in the books for perspective beyond the assignments.

Grading: Meaningful but reasonable, based on homework. (There is no final exam.)

Topics: Partial order and combinatorics, lattices, distributive lattices and Boolean algebras, algebraic systems, varieties, free algebras, congruence relations, subdirect representation, Mal'cev conditions, congruence-distributive varieties, finite basis problems, structure of finite algebras.

Math 222B: Not offered this year, but the topics listed for 222A include much material originally from 222B.