## **Disclaimer for Chapter Outlines**

The outlines I am providing are lists of SOME of the basic skills, definitions, theorems, and facts you have to know from each section of the text. They in no way comprise complete lists of all the things you have to know for the tests.

I consider these outlines to be lists of the BASIC SKILLS AND FACTS from each section; you absolutely must know these things going into the tests, but you will also be required to stretch your knowledge further on the actual exams. The outlines are not promises concerning what material will or will not be on the tests.

In particular, on the exams I may ask questions connecting different topics, calculations that you have not seen before but which are possible if you have a full understanding of the definitions involved, and proofs that are not specifically indicated in the outline.

As a general rule, you need to be able to define the objects we use (with formal mathematical definitions), know various properties about those objects (and why they are true), use these definitions and properties to solve problems of a computational AND conceptual nature (*e.g.* proofs).

Some of each exam will involve problems very similar to the homework; some will reflect the reading (so be sure you've read the sections carefully!) and the material we discuss in lecture (so look over your lecture notes!); some will be material presented in ways you might not have seen, to test whether you can use the material you've learned instead of just memorizing how to do certain types of problems.

If you think of something not on the outline, don't automatically assume that you "don't have to know it" unless I have already told you so in class (it may appear elsewhere in the outline, or it may just not be specifically spelled out in the outline). If you're not sure what I mean by some item on the outline, try looking through the reading and homework for that section to see if you can find it there.