

WHICH PARTS OF ROTMAN HAVE WE COVERED IN MATH 210?

Here is a list of what I think we've covered in Rotman, and what we covered outside of Rotman. Please let me know if I'm forgetting anything, so I can let everyone else know!

Chapter 1: assumed.

Chapter 2: covered completely.

Chapter 3: covered completely, except that Section 3.7 (linear algebra) was assumed. Our commutative rings always have "1", unlike Rotman's. We also discussed UFDs, PIDs, and EDs in more detail.

Chapter 4: We didn't discuss the explicit solution to the cubic. We didn't really cover any material starting on p. 229 (the discussion of simple extensions). We also defined a *normal* extension, but all of the results we discussed are implicit in Rotman.

Chapter 5: Our proof of the Fundamental Theorem of Finite Abelian Groups was different, so don't worry about any of the terms that arise in Rotman's proof. Ignore the discussion of unitriangular matrices (p. 274–277). We didn't define lower central series or nilpotence (p. 287). Skip 5.4–5.6 completely. (We have done some presentations, section 5.5, but our discussion was a bit different.)

Chapter 6 (Commutative Rings II): We covered up to Section 6.2. You've been exposed to Noetherian rings (6.3) and Zorn's lemma (6.4), but don't worry about them for the final.

We also covered semidirect products (Section 10.2), but you may prefer your notes to Rotman.