

Reading List for the Final

(referring to Jackson 3rd Edition)

Chapter 12

- though we covered Section 12.1 before the midterm, review this as the foundation for Lagrangian things covered in the second half of the course
- not part of second half: Section 12.2 to 12.5 (inclusive); this was on the midterm so won't be on the final
- skip Section 12.6
- yes Section 12.7
- Section 12.8, but don't need to consider the LC circuit as a way to set limits on photon mass
- skip Section 12.9
- yes Section 12.10
- Section 12.11

Chapter 14

- Sections 14.1 to 14.5 (inclusive) though we didn't cover, in class, Equations 14.68, 14.69, 14.70 in Jackson
- Section 14.6 though we didn't cover, in class, periodic circular motion (i.e. skip material after the paragraph after Equation 14.91)
- skip Section 14.7
- yes to Section 14.8 on Thomson Scattering which was assigned reading as part of Problem Set #4, though don't worry too much about the extension to Compton scattering and beyond

Chapter 13

- Sections 13.1 to 13.4 (inclusive)
- note: this material had plenty of alternative presentations of material (e.g. the impact parameter approach, which is a typical way to derive the energy loss formula); the objective in learning this is not to worry too much about mastering all of the mathematics and the different ways to model this problem but just to understand that we can write down a semi-classical description of these phenomena relevant for particle interactions in media