

References for Physics 322

I have all of these texts in my office and am happy to loan them out for a weekend or a couple of days at a time. Learning to learn from a book is a very valuable skill and I encourage you to develop it.

1. **Text:** *Introduction to Electrodynamics*, D.J. Griffiths, 3rd ed., Prentice Hall 1999 ISBN 0-13-805326-X.
2. **Introductory:** Your first year physics textbook *Physics for Scientists and Engineers*, R. Knight, 1st ed. Pearson, 2004 ISBN 0-8053-8960-1 seems to have lots of good introductory stuff in Chapters 25-35. There is also a second edition. I also have copies of Halliday and Resnick (my 1st year text). A brief refresher from one of these texts might help to clarify the ideas presented in class (what Peter told you was right!).
3. **Intermediate:** *Electricity and Magnetism*, E.M. Purcell, 2nd ed. McGraw-Hill, 1985 ISBN 0-07-004908-4. This is kind of a neat text and also not too long. I really like the part on relativity. It is in CGS units but that can be part of the fun.
4. **Funky:** *Feynman Lectures on Physics Vol. II*, R.P. Feynman, R.B. Leighton, M. Sands, Addison Wesley, 1964 ISBN 0-201-02117-X-P, 0-201-02011-4-H. These lectures were given to 1st and 2nd year students which makes the mathematics quite accessible. What is really neat is that I learn something new almost everytime I read them. Feynman has a true talent for describing the mysteries and wonder of physics. If you ever get bored and need a physics “pick me up” I really recommend this book.
5. **Previous Text:** *Electromagnetism*, G.L. Pollack & D.R. Stump, Addison Wesley/Peason-Education, 2002 ISBN 0-8053-8567-3 Similar to our text but a bit more in depth. I taught using this book for 5 years so this is the most likely source of something that isn’t in Griffiths. There are lots of challenging problems.
6. **Previous Previous Text:** *Electromagnetic Fields and Waves*, Lorraine, Corson, and Lorraine. This was used as the text in the EM courses by D. Pink in the past. I believe this is a good reference book and has some examples you don’t see in the other texts but I find it a bit dry for just “reading”.
7. **Graduate Level:** The classic *Classical Electrodynamics* by J.D. Jackson. Good to give the mind a stretch. Another book I have is *Classical Electromagnetism* by Jerrold Franklin and it has more detail for Green’s functions.
8. **For the clinically insane:** *The Classical Theory of Fields*, L.D. Landau and E.M. Lifshitz, Pergamon Press. This book is well into Einstein-Lorentz transforms by page 6. I haven’t read much farther than this... makes Griffiths look like *Archie Digest* (guess that makes me Archie). Might stretch your mind a bit too much but carrying around a copy will really impress the other faculty.