

Physics 7270

Quantum field theory is the language used to study problems with a large number of quantum mechanical degrees of freedom. The applications range from particle physics, to condensed matter, atomic physics, and beyond.

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Class meets Tuesdays and Thursdays 3:30 to 4:45 in G2B21

Office hours: I will certainly be on campus all day Tuesdays, Wednesdays and Thursdays and (except for an hour or so before class, and 10:30 to 11 when the particle theorists go for coffee) I will be happy to talk to you.

Grade: homework, maybe eight or nine sets, irregularly spaced? The last one will serve as a take home final and you will be asked to do it independently, without talking to each other. Grade:

- homework 80
- take home final 20
- total 100 points

The questions will also be posted on

- <http://www-hep.colorado.edu/~degrand/p7270.html>

The default rule is that late homework will not be accepted without advance negotiation. Homework solutions will be scanned onto the class web page. Our grader is XXX

Text: My typed notes are on line on the class web page and I'll put them on Canvas. The courses by David Tong and Sydney Coleman (see the class web page for the url for Tong and the arXiv number for Coleman) come the closest to what I am going to try to do. I ordered Srednicki, "Quantum field theory" as an optional text. I won't follow this closely, but it is nice to see alternative approaches. There are many good quantum field theory texts. Chapter 2 of my notes gives possibilities.

Finally, if you qualify for accommodations because of a disability, see me as soon as possible but before the second week of class.