

Physics 165 Introduction to Particle Physics  
Fall 2008

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Class M,W,F 11:10-12 . [INTS 1132](#)  
Discussion T 3:40 -04:30 HMNSS 1403

Text Particle Physics 2<sup>nd</sup> ed.  
by B.R. Martin & G. Shaw  
JohnWiley & Sons

We will use blackboard for communication, i.e. HW assignments, test dates etc.

Aside from the HW there will be a midterm, late in the quarter, a presentation and research paper. We will begin to work on the presentations (which will be done in class) and research paper during the 2<sup>nd</sup> half of the quarter.

Material covered: Ch 1-5, parts of 8,9,11 in a standard lecture/problem set format. There may be a section on string theory if folks want it, and we have time. The third of the course will cover special topics in the form of presentations, research, lectures etc.

“Final” Exam date: Thurs 12/22 8-11 AM – there is no final. We will use this date for presentations.

The Presentation and research paper will be on the same topic. Essentially you give a talk, then write the talk up in the form of a 5-10 page paper. Some suggestions for topics: The LHC or one of the LHC detectors and what they might see, Past experiments, Dark energy, Particle Detection techniques (e.g. gas drift chambers, calorimeters, Silicon detectors etc). RHIC and its experiments, FNAL/CDF/D0, Space based experiments (e.g. GLAST). Underground searches. Attempts at unification. And any other reasonable idea you can think of.