

# Physics 450 – LHC Physics

## General Information

course meeting: TTh 9:30 – 10:45 am, Varian 355

Professor: Michael E. Peskin  
SLAC, Central Lab R322 926-3250  
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Textbook: R. K. Ellis, W. J. Stirling, and B. R. Webber, QCD and Collider Physics

Useful references: V. D. Barger and R. J. N. Phillips, Collider Physics  
R. D. Field, Applications of Perturbative QCD  
M. E. Peskin and D. V. Schroeder, An Introduction to Quantum Field Theory  
G. Sterman, An Introduction to Quantum Field Theory

(additional journal references are posted on the course Web page)

Web page: <http://www.slac.stanford.edu/~mpeskin/Physics450/>

Final exam: none

## Syllabus

1. Basic properties of high-energy hadron collisions
2. The parton model
3. QCD radiative corrections
4. Physics of hadronic jets
5. Computation of multi-jet cross sections in QCD
6. W, Z, t, Higgs processes at the LHC