

Physics 535

Introduction to particle physics

9:30 - 10:45 TR

6102 Soc Sci

Instructor: L. Pondrom

Office 4273 Chamberlin, 2531 Sterling

Available after class Tues and by appointment

Text: Byron Roe, Particle Physics, Springer (1996).

Reserve in Physics Library: Perkins, Halzen and Martin, Gordon Kane, William Rolnick.

Particle physics is a very broad subject. Each text has its own strengths and weaknesses. Any text will cover more material than is feasible in a one semester course. Roe's book is the most recent, and is at the right level. He covers too many topics, and as a result is sketchy on some subjects which we will cover in detail. The reserve books furnish supplementary material. Kane has attempted to write an introductory text entirely on gauge theories - a subject which we will not discuss much, but the student may find interesting.

There will be one in class test and a final exam. Homework will be assigned every Thursday, due the next Thursday. Grade is composed of 30% homework, 30% quiz, 40% final exam. At least 10 homework sets must be submitted to pass the course. Mathematica may be used to solve certain homework problems. The NEXT room 2409 Sterling has mathematica on its computers (while they last!).

Chapters refer to Roe's text

	Tues	Thurs
Sep 2	Chap 1 Intro	Chap 1
Sep 9	Chap 1	Chap 4 Symmetries
Sep 16	Chap 4	Chap 4
Sep 23	Chap 4 K-Kbar	Chap 4 CP violation
Sep 30	Chap 5 hadron scatt	Chap 5
Oct 7	Chap 5	Chap 6 quark model
Oct 14	Chap 6	Chap Quiz
Oct 21	Chap 6	Chap 6
Oct 28	Chap 7 Weak decays	Chap 7
Nov 4	Chap 7	Chap 7
Nov 11	Chap 7	Chap 7
Nov 18	Chap 8 Parton model	Chap 8
Nov 25	Chap 8	holiday
Dec 2	Chap 8	Chap 9 QCD
Dec 9	Chap 9	Chap 9 last class

Exam 7:45 am Friday Dec 19 (yak!)