

PHYS 490

Danny Marfatia, Spring 2016

Syllabus:

1. Rutherford scattering
2. Nuclear phenomenology, models and radiation
3. Elementary particles
4. Continuous and discrete symmetries
5. Neutral kaons and CP violation
6. Standard Model and beyond

Textbook:

Das and Ferbel, *Introduction to Nuclear and Particle Physics*

Other useful books:

Henley and Garcia, *Subatomic Physics*

Perkins, *Introduction to High Energy Physics*

Griffiths, *Introduction to Elementary Particles*

Halzen and Martin, *Quarks and Leptons*

Homework:

Problems will be assigned as material is covered. You may discuss the homework with your classmates, but must write up your solutions independently. On the due date, you will present your solutions in class. Credit will be based on your presentation and written solutions (which I will scan but not correct in detail). Late homework will not receive credit.

Exams:

There will be 3 midterms and a final. You may use your hand-written notes during these exams.

Grading:

The final letter grade will be based on

- (a) homework: 10%
- (b) 3 midterms: 18% each
- (c) final: 36%

Office hours:

Drop by my office, 439 Watanabe Hall. An appointment by e-mail (dmarf8@hawaii.edu) or by phone (956-2969) is preferable.

Electronic devices like phones, laptops and tablets may not be used in class.