

Particle Physics II

Winter Semester 2011/2012

Albert-Ludwigs-Universität Freiburg



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Syllabus

- 0 Introduction
- 1 Basic Concepts
- 2 Electromagnetic Interaction
- 3 Weak Interaction
- 4 The Electroweak Standard Model
- 5 Strong Interaction
- 6 Structure of the Nucleon
- 7 CP Violation
- 8 Neutrino Physics
- 9 Higgs Physics
- 10 Limitations of the Standard Model

Literature

Quarks and leptons,

Authors: Frances Halzen and A.D. Martin

Hardcover, Englisch, 416 Seiten, Wiley and Sons, 1984, 149 Euro

Introduction to Particle Physics,

Author: David Griffith

Paperback, English 470 Seiten, Wiley VCH, 2008, 70 Euro

Feynman-Graphen und Eichtheorien für Experimentalphysiker

Author: Peter Schmüser

Paperback, German, 216, Springer, 1995, 45 Euro

Introduction to Elementary Particle Physics

Author: Alessandro Bettini

Hardcover, Englisch, 442Pages Cambridge Uni. Press, 2008, 50 Euro

Elementarteilchenphysik von den Grundlagen zu den modernen Experimenten

Author: Christoph Berger

Paperback, German, 496 Pages, Springer, 2006, 50 Euro

Exercises and “Schein” Criteria

Exercises: 2 hours per week

“in class” work + homework (2 people hand in together)

Responsible: Dr. Martin Flechl, Dr. Stan Lai

Dates: Friday 2 pm (s.t.) to 4 pm (c.t.), Seminar Room 3

Final examination:

to participate in final examination you need 50% of points in homework

For “Course Achievement (without grade)” CA: pass written exam w/o mark

For “Academic Record” (with grade)” AR: pass written exam, with mark

you have to decide before examination which kind you want CA or AR