Syllabus PHYS 415: Quantum Mechanics

- **Subject:** The H atom in great detail, fermions and bosons, the periodic system of elements, perturbation theory.

- **Instructor:** S.J. van Enk, 251 Wil, svanenk@uoregon.edu

- **Office hours:** Wednesdays, 10.45am-11.45am and 3.05pm-3.55pm. However, I have an open door policy and you can ask me questions about anything at any time.

- **TA:** Luo, Xianghui, 443 Wil, xluo@uoregon.edu

- **Textbook:** D. J. Griffiths, *Introduction to Quantum Mechanics*, second edition. A popular book, although not to everyone’s liking. We’ll finish Chapter 4 this term, as well as 5, 6 and 7.

- **Some other books:**
  - at roughly the same level: Liboff, *Introductory Quantum Mechanics*;
    Feynman, *Feynman’s Lectures on Physics*, Vol. 3 (for insights and fun);
  - at a lower level: French and Taylor, *Introduction to QM*;
  - at a higher level: Sakurai, *Modern Quantum Mechanics* (used in the graduate course at the UO); Mandl, *Quantum Mechanics*, Shankar, *Principles of Quantum Mechanics*;
  - all levels mixed up + philosophy: Science library: QC 174.12

- **Homework:** Due every Thursday, except in the week of the Midterm. Late homework (handed in before the weekend) counts for 75%. Your lowest homework score will be dropped.
  Collaboration is good, even encouraged, but you have to write down your solutions independently.

- **Grading:** Midterm (25%, Thursday, Feb. 18), Final (30%, Tuesday morning 8am), Homework (45%). I will not curve any individual homework score or midterm score, but I do curve the final grade. If the scores are reasonable, the average score will correspond to a bit higher than a B, and roughly one standard deviation below will be a C.

- **Blackboard:** I use just one part of blackboard: course documents (solutions to problems, articles related to material, notes, statistics on homework/midterm scores)