Syllabus PHYS 414: Quantum Mechanics

- **Subject**: How Quantum Mechanics works. This requires some mathematics: complex numbers, differential equations, and linear algebra (there is an Appendix in the textbook on linear algebra).

- **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 will probably get through Chapters 1–3 and part of 4 this term, 5, 6 and 7 next term, and 9, 10, and 12 in spring.

- **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 weeks of the Quiz/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. Copying is not allowed!

- **Grading**: Quiz (10%, Thu Oct. 22), Midterm (20%, Thu Nov. 12), Final (30%, probably Monday morning 8am), Homework (40%). I will not curve any individual homework score, quiz score, midterm score, but I do curve the final grade. If the scores are reasonable, the average score will correspond to a B, one standard deviation above (below) will be an A (C).

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