Tutorials for Mathematical Methods and Quantum Mechanics Michaelmas 2009

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I. LECTURES

Fabian Essler (Theoretical Physics) is lecturing the Mathematical Methods course, and there are 4 lectures per week for the first 4 weeks and 2 per week for weeks 5,6. The Quantum Mechanics course which starts in week 4 won't make any sense unless you make the effort to understand the maths early. James Binney (Theoretical Physics) will be lecturing Quantum Mechanics. It is strongly advised that you attend lectures.

II. TUTORIALS - TURN UP ON TIME, HAND IN WORK, ETC

- Tutorials will be held every Wednesday afternoon during weeks 1-8 in groups of 2 for 1 hour each.
- Work for the tutorials should be handed in by 4pm the day before into the 'ABCDE' pigeon hole in Theoretical Physics on Keble Road.
- Don't hand in loose sheets - staples, paper clips or plastic wallets please.
- In tutorials, ask if you don't understand. Never be embarrassed to ask what you think is a 'stupid question'.
- Bring your own copy of the problem sheets to tutorials.

III. MY EXPECTATIONS - WORK HARD, ETC

- Avoid handing in a first attempt. Instead write up your solutions or attempts to the problems in a final version. Rewriting your work is an opportunity to choose notation which makes your solution elegant, and an opportunity to chase down algebraic errors, as well as an opportunity to spot quicker methods, eg. if after a page of working, the answer is 0, you can bet there is a quicker way. Neat solutions are easier to revise from, and easier to mark.
- Don't worry about wasting paper, consider it your contribution to carbon capture.
- Don't fudge derivations. If you don't know where the 4π comes from, don't pretend you do. If you're missing a minus sign, don't add one in.

IV. WHAT YOU CAN EXPECT FROM ME

- Some of my obligations are provided in the Student Handbook (App. IV)
- In addition, sometimes I may produce my own notes on a topic, or a summary of important points. Whenever I do this, I'll make them available on my website `http://www-thphys.physics.ox.ac.uk/people/PeterConlon/`
- Between tutorials, I will respond promptly to reasonable requests by email for hints or assistance if it's clear that you've given the problems a decent attempt.

V. GENERAL ADVICE

Physics (and maths) is a subject which is meant to be *understood*, not learnt-by-rote, and understanding takes time and effort. Talk to other physics students about physics - learning from peers is often very effective. Read books, don't just rely on lectures.