

## PHYS 332: Quantum Mechanics II.

### Content:

This course continues on from the Quantum Mechanics I course which most of you will have taken with Craig. While the focus of the course will be on the practical applications of quantum mechanics we will also hopefully delve in to some of the ideas and philosophy of quantum mechanics (as best we can). However, most of this course will cover the practical aspects of quantum mechanics and some of the approximation techniques that we can use to solve problems.

### Schedule:

Lectures will be held MWF 11:30am to 12:20pm in Rock 304.

The course will be taught in 2 cycles. The first cycle (1/3 of the course) will introduce most of the concepts and tackle some relatively simple problems. The second cycle (2/3 of the course) will revisit the material in more depth.

### Instructor:

Gavin Buxton

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Course Web Page: <http://www.phys.cwru.edu/courses/p332>

### Required text:

Introduction to Quantum Mechanics by David J. Griffiths.

There will be other required reading provided electronically during the course.

### Workload:

Homework	25%
1st hour exam (Wed 11th Feb)	15%
2nd hour exam (Wed 1st Apr)	15%
3rd hour exam (Wed 22nd Apr)	15%
Final exam (1st May 8:30am - 11:30am)	30%

**Homework:**

There will be 10 homeworks in total (due Wednesday's when there isn't an exam). The lowest 2 will be dropped and your homework grade will come from the top 8 grades. The third homework is discussion based and will take place in the lecture on Friday 6th February (therefore, you should make sure you attend this lecture). You will also have required reading for this week.

Please feel free to work with other students. You should also feel encouraged to use the bulletin board for homework discussion.

When answering questions for this course (and any physics course in my opinion) it can be useful to sketch the result. This gives an intuitive feel for the answer that you may have mathematically obtained. Some of the functions may be too complicated to simply sketch and a numerical plot may be required. Therefore, you should ensure that you are comfortable with plotting a function in some way (e.g., graphic calculators, gnuplot, excel, etc...)

**Grading:**

An "A" grade requires 85%, a "B" grade requires 75%, a "C" grade requires 65% and a "D" grade requires 50%. These thresholds may be lowered (in the event that I set a particularly hard final exam, for example) but will not be raised. Therefore, you know the requirements in advance and there is no reason not to (in fact, you are strongly encouraged to) help, and work with, other students.

**Office Hours:**

My door is always open.