

Brief notes on Basic Quantum Mechanics

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Foreword

This set of notes is a summary of the content covered in the NUS Physics modules PC2130 and PC3130. For PC2130 I mainly used the textbooks [2] and [3], whereas for PC3130 I used mainly [4] and [1]. The purpose of this set of notes is so that the reader can quickly get the key ideas and derivations in standard undergraduate quantum mechanics without referring to the textbooks. Basic results from Linear Algebra will be used without proof (e.g. if two operators commute then they can be simultaneously diagonalised, etc etc).

References

- [1] C. Cohen-Tannoudji, B. Diu, and F. Laloe. *Quantum Mechanics, 2 Volume Set*. Wiley, 1992. ISBN: 9780471569527. URL: <https://books.google.com.sg/books?id=pWVVAQAACAAJ>.
- [2] J.M. Schwindt. *Conceptual Basis of Quantum Mechanics*. Undergraduate Lecture Notes in Physics. Springer International Publishing, 2015. ISBN: 9783319245263. URL: <https://books.google.com.sg/books?id=aSbUCgAAQBAJ>.
- [3] R. Shankar. *Principles of Quantum Mechanics*. Springer, 1994. ISBN: 9780306447907. URL: <https://books.google.com.sg/books?id=2zypV5EbKuIC>.
- [4] N. Zettili. *Quantum Mechanics: Concepts and Applications*. Wiley, 2009. ISBN: 9780470026786. URL: <https://books.google.com.sg/books?id=6jXlpJCSz98C>.

Things yet to be written:

1. Everything bro