

First course handout for PHY-602

In review of Quantum mechanics we will try to learn new things using the concepts which the students know. In this sense the course satisfy two conditions, it will be review of old concepts used in understanding new material.

The course will mainly deal with,

1. density matrix formulation of QM,
2. Bell's theorem and its outcome,
3. Feynman path-integral methods
4. Berry phase and quantum phases.

These topics will be introduced and problems will be given regularly. Primarily there will be two examinations and one or two quizzes for this course. The quiz dates will be determined once the course starts.

The students can read any modern book on quantum mechanics. The book by Sakurai and Feynman and Hibbs encapsulates the spirit of the course. Except these the students are welcome to read about the topics from modern reviews on these subjects available in the net.