

CHAPTER OVERVIEW

63: Quantum Mechanics

In this course we have been studying mechanics as formulated by Sir Isaac Newton; this is called classical mechanics. Although classical mechanics can be applied to a wide range of situations, it was discovered at the beginning of the 20th century that it cannot be applied to very small distance scales—say on the order of the size of an atom or smaller. For these small distance scales, classical mechanics no longer works, and a completely different system of mechanics is needed, called quantum mechanics. Here we will present a brief overview of quantum mechanics, so that you can get a sense for what it is all about. For simplicity, we will be working in one dimension, although the equations can be generalized for three dimensions.

[63.1: Review of Newtonian Mechanics](#)

[63.2: Quantum Mechanics](#)

[63.3: Example- Simple Harmonic Oscillator](#)

[63.4: The Heisenberg Uncertainty Principle](#)

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