CHAPTER OVERVIEW

12: Harmonic Oscillator

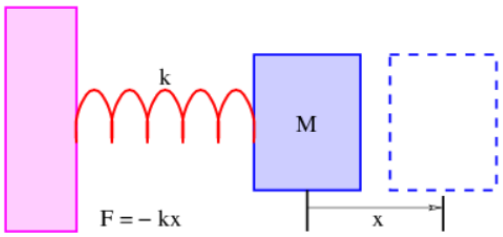

Figure 12.1:: Illustration of a mass-spring system.

Figure 12.1: illustrates the prototypical harmonic oscillator, the mass-spring system. A mass M is attached to one end of a spring. The other end of the spring is attached to something rigid such as a wall. The spring exerts a restoring force $F = -kx$ on the mass when it is stretched by an amount x, i. e., it acts to return the mass to its initial position. This is called Hooke's law and k is called the spring constant.