8-2. Force P acts on a bar as shown below. The bar has a length of $L \sim N(1, 0.02^2)\,\text{m}$, determine the distribution of its critical buckling load of the bar. Assume that the spring has a stiffness of $k = 0.45\,\text{N/mm}$. (**Ans.** $P_{cr} \sim N(450, 9^2)\,\text{N}$)