

ECE 656: Fall 2009
Lecture 12 Homework

- 1) Consider a semiconductor with a slowly varying effective mass, $m^*(x)$. Following the procedure in Lecture 12, derive the equation of motion for an electron in k -space analogous to the result for a constant effective mass.

$$\frac{d(\hbar k_x)}{dt} = F_e = -\frac{dE_c(x)}{dx}$$