

ECE 656: Fall 2009
Lecture 16 Homework

Follow the approach of Lecture 16 to compute the magneto-conductivity tensor for graphene, which has an $E(k)$ given by:

$$E(k) = \pm \hbar v_F \sqrt{k_x^2 + k_y^2}$$

- 1) Show that the approach used in Lecture 16, DOES NOT work for graphene, and explain why.

- 2) See if you can find a way to solve the BTE for graphene when a small magnetic field is present.