

ECE 656: Fall 2011
Lecture 31 Homework
Due MONDAY, November 21, 2011

In Lecture 31 we presented the energy flux equation as

$$\frac{\partial F_{W_x}(x,t)}{\partial t} = -\frac{dX}{dx} - \frac{3q}{m^*} W \mathcal{E}_x - \left\langle \tau_{F_w} \right\rangle$$

1) Verify that this result is correct.

Later in Lecture 31, we simplify the result to

$$F_w = -3\mu_E W \mathcal{E}_x - 3\mu_E \frac{d(W k_B T_e / q)}{dx}$$

2) Verify that this result is correct.