ELEG 667-010 - Advanced Nanostructure Devices – Fall 2006

Homework #2 - due Monday, 25 September 2006, in class

1. Problem 1.5, in chapter 1, Lundstrom, p. 51 in 2nd edition.

2. Problem 1.9, in chapter 1, Lundstrom, p. 52 in 2nd edition.

3. Problem 2.1 (a) only, in chapter 2, Lundstrom, p. 116 in 2nd edition. (Hint: this problem is similar to Eq. (2.40) in the text, but here does ***not*** include the fractional change in momentum).

4. In Problem 2.1 above, consider the explanation addressed in part (b). Briefly discuss why the total scattering rate is higher than the momentum scattering rate. Note, do not perform the calculation for GaAs at the beginning of part (b).

Homework assignments will appear on the web at:
http://www.ece.udel.edu/~kolodzey/courses/eleg667f06.html
  Note: On each homework and report submission, please give your name, the due date, assignment number and the course number. For full credit - include units/dimensions for all numerical quantities