Goals for Exam 2: ECE 305, Friday, February 13, 2015
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The exam will be conducted in class and will consist of three questions. The first question is multiple choice and is about basic concepts and vocabulary. The second two questions are “workout” problems similar to the problems in the homework assignments.

You should bring a calculator. The only calculator permitted for exams in ECE undergraduate courses is the Texas Instruments TI-30X IIS scientific calculator.

A sheet of key equations will be provided.

This exam will test your understanding of and ability to work with three concepts/topics:

1) The “semiconductor equations” (e.g. drift-diffusion equation, continuity equation, recombination, generation, Poisson equation, Einstein relation, etc.)

2) Drawing and understanding energy band diagrams.

3) Solving the minority carrier diffusion equation and understanding diffusion lengths and quasi-Fermi levels.

This exam covers materials in Weeks 3 and 4 (pages 75-134 in the assigned reading). Homework assignments 4 and 5 are relevant for this exam.