Goals for Exam 3: ECE 305, Friday, March 6, 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) PN junction fundamentals, energy band diagrams, IV and CV characteristics, important non-idealities such as breakdown, high injection, etc. and an acquaintance with the basics of fabrication.

2) PN junction electrostatics using the depletion approximation.

3) The ideal diode equation – underlying assumptions, derivation, limits, and how to use the equation.

This exam covers materials in Weeks 6-8. Homework assignments 6, 7, and 8 are relevant for this exam.