The 1st Exam will be on Tuesday 10/3/17

The exam will be a **Closed book, only those notes handed out last week (you may add to this single sheet, with calculator)**.

First part will be questions with simple answers and/or word answers.
Second part will be problems worked out with your calculator.

The exam will cover

1. HW 1 Energy sources, plant efficiencies

2. HW 2 AC steady-state review, used extensively throughout class

3. HW 3 RMS & Single-phase AC power. \( P \), \( Q \), \( S \), \( |S| \) \( \text{pf} \) cor rection of \( \text{pf} \)

4. HW 4&5 3-phase AC power.
   \[
   V_L, V_{LL}, V_{LN}, I_L, I_{LL}, I_Y, S_3\phi, S_I\phi
   \]
   \[
   Z_Y = \frac{Z_\Delta}{3}, \quad Z_\Delta = 3 \cdot Z_Y \quad \text{pf} \text{ correction of pf}
   \]

5. HW 6 Magnetic circuits
   \[
   B = \mu \cdot H, \quad H = \frac{N \cdot i}{I_c}
   \]

6. HW 7 - 8 Transformers, including nonideal
   Transformer basics, including ratings and impedance transformation.

7. HW 9 Auto-transformers
   Non-ideal transformer model
   Calculations \%VR \( \eta \)

8. HW 10 Lab 1
   Electrocution Safety. Deadly current, body resistance, etc.
   Basic concepts

9. Field trips to Gadsby power plant & Dispatch Center
   Rankine power cycle

You can download old exams from HW page on class web site. But remember, they may cover more than we did in our class.