UNIVERSITY OF CALIFORNIA
Department of Electrical Engineering and Computer Sciences

EE243: Instructions for Term Paper
(Due before May 18, 5pm)

Sp 2009 **N.Cheung**

A term paper for EE243 and will account for 25% of the total course grade. The goal of the term paper is to use what you have learned in EE243 to assess some state-of-the-art processing technologies or to develop new applications**. Topics in areas outside your research area are encouraged and the selected topic CANNOT be same as your MS/PhD research project.**

Examples topics of current interest:

Front-end Processing:
High channel mobility technologies, High-K/metal gate stacks, Mechanical stress effects on Devices
Back-end Processing: Low-k dielectrics,
Patterning : Lithography beyond 20nm node
Novel Technologies: Spintronics, Magnetic/Ferroelectric Devices, 3D device structures
Large Area Processing: displays and photovoltaics
Nanoscale Device Process Integration
Heterogeneous Integration of Microsystems: IC, MEMS, Photonics and Microfluidics, Through Si Vias (TSV)
Design for Manufacturing (DFM)
…and other topics of your interest

Start with a literature search (websites, digital library, your colleagues) and decide on a topic. Please make appointment to see me to define the scope of your term paper.

Your term paper can be either A) survey paper or B) proposal paper. **Main body of term paper is limited to 20 pages** max. Supporting information should be put separately as appendice.

Format of Proposal term paper
1) Statement of problem (Why is the topic important)
2) State-of-the-art (What have been done already)
3) Proposed Approach (How will you achieve your goal)
4) Expected Results of proposed approach (Justify with literature data or your calculation/simulation)

Format of Survey term paper
1) Statement of problem (Why is the topic important)
2) State-of-the-art (What have been done already)
3) Critical Review of current understanding (Your own criticism of state-of-the-art)
4) Proposed work to advance the topic (Justify with literature data or your calculation/simulation)

Components 3) and 4) have to be at least 50% of your term paper content.

Powerpoint Presentations – May 6 and May 11, 9-10:30am, 15 minutes per project.
Paper submission Electronic format preferred – pdf or WORD