Some selected topics for the VLSI course.

1. MOS theory
       NMOS and CMOS Technlogy
       I-V curve and threshold voltage
       devices -- gates, Xmission gates etc.

2. CMOS processing steps
       design rules
       layout, Euler path and other layout
       idelas

3. Basic circuit concepts
       -- sheet resistance
       -- capacitance
       -- delays (pSpice and empirical models)

4. Mics. topics
       -- Buffer design
       -- Electrostatic Protection
       -- Pad design
       -- Scaling of MOS circuits
       -- Power dissipation

5. Other forms of CMOS logic
       -- Pseudo-nMOS logic
       -- Dynamic Logic
       -- Clocked CMOS logic
       -- Domino and n-p logic
       -- BiCMOS logic

6. Verilog
       some working knowledge
       of the behavioral and the
       data-flow models