GEORGE MASON UNIVERSITY
ELECTRICAL AND COMPUTER ENGINEERING DEPARTMENT

FALL 2009

ECE 431: DIGITAL INTEGRATED CIRCUIT ANALYSIS AND DESIGN

Time and location:  TR 12:000 – 1:15 pm,  W 1004

Instructor:  Dimitris Ioannou, ENG 348, tel. 993-1580, dioannou@gmu.edu

Office Hours: TR  2:30 -3:30 pm. Other times can be arranged by appointment.

Textbook:  "CMOS DIGITAL INTEGRATED CIRCUITS”  


COURSE OUTLINE

1. Basics of MOSFET operation and SPICE modeling
2. MOS inverters: static characteristics
3. MOS inverters: dynamic operation
4. CMOS Layout and Simulation
5. Combinational MOS logic circuits
6. Sequential MOS logic circuits
7. Dynamic MOS logic circuits
8. Semiconductor memories

Grading
Homework:  - 10%
Project:  - 10%
Test 1  - 20%
Test 2  - 20%
Final  - 40%