EE8331: Advanced Analog Integrated Circuit Design

Credits:	3	*Instructor:*	Ramesh Harjani, 4-165 EE/CSci, 625-4032
Time:	09:05 – 09:55 MWF	*Location:*	ME 102
Section:	01 & 08 (UNITE)	*Office Hours:*	10:00 – 11:00 MWF

Midterm I Exam: **Friday, Feb 25, in class**
Midterm II Exam: **Friday, Apr 28**
Project: final project report due date: **Friday, May 5th**
interim project report due date: **March 24th**
| project proposal due date: **Friday, Feb 11th**

Grading System: Homework 15%, Midterm I 25%, Midterm II 25%, Project 35%

Course Description: Advanced techniques for the design of analog integrated circuits. The course is basically divided into two basic parts. One, weak inversion low power and low voltage design. And, two, data converters & PLLs. Topics to be covered include:

1) Weak inversion
   a) device models
   b) Advanced opamp and OTA topologies for low power
   c) Low power comparator design
2) Data converters & PLLs
   a) Oversampled
   b) Nyquist rate
   c) PLLs

Students will be expected to design and test several design problems. All students are also expected to complete a single chip design which may include layout. Students are expected to use SPICE, or an equivalent circuit simulator, for design problems.

Course Material **Book** Analog Integrated Circuit Design
D. Johns and K. Martin, Wiley 1997
Plus: Class notes and journal papers