EE 5230 Analog Circuit Design **2016 Fall Semester**

1. Course Description: This course covers the analysis and design of analog integrated circuits. Extensive use of EDA tools (HSpice and Cadence) is required in homework assignments.

2. Prerequisites: Electric Circuits, Electronics, Signals and Systems (basic knowledge of s- and z-transforms)

3. Text books:

Design of Analog CMOS Integrated Circuits,
B. Razavi, McGraw Hill, 2001.

4. References:

CMOS Analog Circuit Design,
Oxford University Press, P. E. Allen and D. R. Holberg, 2011.
Analysis and Design of Analog Integrated Circuits,
P. R. Gray, P. J. Hurst, S. H. Lewis, and R. G. Meyer, Wiley, 2001.

5. Teaching Method:

Lectures offered in Mandarin

6. Evaluation:

Midterm:	35%	
Final:	35%	
Homework:	16%	(**NO** late homework)
Final project:	20%	

7. Class webpage: NTHU e-learning system (http://lms.nthu.edu.tw)

8. Syllabus

* Basic MOS Device Physics
* Single-Stage Amplifiers
* Differential Amplifiers
* Frequency Response of Amplifiers
* Feedback
* Operational Amplifiers
* Stability and Frequency Compensation
* Noise
* Nonlinearity and Mismatch