

ECE55801 Advanced Analog IC Design

Spring 2016

Instructor: Prof. Seong-Jin Kim, School of ECE
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Classroom: EB2 411

Schedule

Class hours: 2:30~3:45pm on Monday and Wednesday

Office hours: 10:30~11:30am on Monday or appointment-basis

Course Objectives

To learn and practice the intuitive analysis and design of analog integrated circuits with both BJT and CMOS technologies

Textbook: Class material

References

Behzad Razavi, Design of Analog CMOS Integrated Circuits, McGRAW-HILL

P. R. Gray, P. J. Hurst, S. H. Lewis, R. G. Meyer, Analysis and Design of Analog Integrated Circuits, 5th ed., John Wiley & Sons

Gyu-Hyeong Cho, Analysis and Design of Electronic Circuits, Hongreung Science

Grading: Attendance 10%, Homework 25%, Midterm 30%, Final exam 35%

Your class attendance will counts for 10% of grading. If you have some special reason not to come to the class, you have to notice it in advance. More than 2 missing classes will give you penalty as follows.

0 ~ 2:	0%
3:	-1%
4:	-3%
5:	-5%
6:	-7%
7:	-10%
8 ~ :	no grade (F)

Being late twice will be regarded as being absent once. Late submission of homework will be penalized 20% per day.

Tentative Course Schedule

Week 1:	Introduction of Analog Design
Week 2:	Models for Integrated Circuit Active Devices
Week 3:	Single-Stage Amplifier
Week 4:	Multi-Stage Amplifier
Week 5:	Differential Amplifier
Week 6, 7:	Frequency Response of Integrated Circuits
Week 8:	Midterm
Week 9, 10:	Feedback
Week 11:	Frequency Response and Stability of Feedback Amplifiers
Week 12:	Current Mirrors
Week 13:	Bandgap References
Week 14:	Noise in Integrated Circuits
Week 15:	Operational Amplifiers
Week 16:	Final