

# ECE558 Advanced Analog IC Design

Spring 2018

**Instructor:** Prof. Seong-Jin Kim, School of ECE  
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**Classroom:** EB3 411

## Schedule

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

Office hours: 10:30~11:30am on Tuesday 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%

## Attendance

Your class attendance will count 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:	-2%
5:	-4%
6:	-6%
7:	-8%
8 :	-10%

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

### **Course Schedule**

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