

# E&CE 636, Fall 2014

## Advanced Analog Integrated Circuits

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### Course Description

This course covers the practical design of MOS, bipolar analog integrated circuits at the transistor level. The design of high performance operational amplifiers, transconductance amplifiers, buffer amplifiers, supply and temperature independent voltage references will be covered. Selection from such topics as switched capacitor filters, analog-digital converters, mixers, oscillators and PLL will be covered.

### Course Outline

Offsets in integrated circuits

Precision operational amplifiers

Slew rate and high speed operational amplifiers

Power supply rejection and alternate operational amplifiers

Output buffers

Temperature and supply independent biasing references

Noise in bipolar and MOS circuits

Selected topics

### Tentative Marking Schemes

	Project	Final
Scheme:	50%	50%