

EE431/EE531 Course Syllabus for Spring 2017

Analog Integrated Electronics

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 Text: Main text is instructor notes. There are references to data sheets and application notes from various manufactures' web sites.

Tentative class schedule – various issues may cause schedule changes

		Lab	
<u>Date</u>	<u>Week</u>	<u>Due</u>	<u>Topics:</u>
J 12	1		Operational amplifiers analysis – basic circuits
J 19	2		Operational amplifiers analysis – errors and frequency response
J 26	3	1	Instrumentation amplifiers and single supply circuits
F 2	4		Test 1 on the above , Electronic noise calculations – thermal
F 9	5		Electronic noise calculations – amplifier
F 16	6	2	Signal Processing Transducers: thermocouples, RTDs, etc.
F 23	7		Signal processing circuit design
M 2	8	3	Frequency Filters – low-pass design, Sallen-Key circuits
M 9	9		Frequency filters continued
M 16			SPRING BREAK – no classes
M 23	10	4	Test 2 on the above , Oscillator circuits – analog
M 30	11		Oscillator Circuits – state machine
A 6	12	5	Non-linear circuits: precision rectifiers, comparators, log circuit
A 13	13	6	Power supply circuits, Thermal analysis and design
A 20	14	7	A/D and D/A converters
A 27	*** Comprehensive Final Exam – all students required to take ***		

Grading:

Lab/homework	20%	
Test average	35%	
Final (comprehensive)	45%	Note: The final may count for more (and the test average proportionately less) if the final scores are significantly better than the test average. All tests are closed book/notes except for provided equation sheet – see test policies on web site. Note: Cheating results in an automatic score of 0.

Note: EE531 students must do a special course related project. See instructor. For EE531 only: Lab/homework: 20%, Test average: 30%, Final: 40%, Project 10%.

There are seven labs

1. Operational Amplifiers
2. Random Signals and Noise Filtering
3. Measuring the Temperature Coefficient of a Resistor
4. Frequency Filters
5. Oscillator Circuits
6. Non-linear Circuits
7. Power Supply Circuits and Thermal Issues