

# EE201 Basic Circuit Theory

Fall 2017

**Instructor:** Prof. Seong-Jin Kim, School of Electrical and Computer Engineering

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**Classroom:** TBD

**Class hours:** 10:30~11:45am on Monday and Wednesday

**Office hours:** 10:00~11:30am on Tuesday

## Course Objectives

To learn and practice the analysis methods and the design skill of basic electrical circuitry including resistors, capacitors and inductors

**Textbook:** James W. Nilsson and Susan A. Riedel, Electric Circuits, 10th ed

(main material)

A. Agarwal and J. H. Lang, Foundation of Analog and Digital Electronic Circuits (reference)

**Grading:** Attendance 10%, Homework(+Quiz) 25%, Midterm Exam 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. If you don't bring the ID card or find out your missing in the attendance check system, you must let me know it within two class days. Other requests will be ignored.

### **Homework**

No plagiarism is allowed in your homework. It is encouraged for you to discuss with your friends, but you must do it by yourself. Do not copy it from solutions at all. I'll give you the solution after the due date. Late submission will be penalized 20% per day, but no more than the day when the solution is uploaded. Some of problems will require PSPICE simulation to foster your design skills. Quizzes during class hours will be given twice.

### **Grade**

It will not be either 100% relative or 100% absolute evaluation, but somewhere in between them. However, the absolute evaluation is much preferred so that you don't need to concern your relative ranking basically. Neither objections nor negotiations about the grade after the course will be accepted.

### **Course Schedule**

- Week 1: Circuit Variables and Circuit Elements (Ch 1, 2)
- Week 2: Simple Resistive Circuits (Ch 3)
- Week 3: Techniques of Circuit Analysis (Ch 4)
- Week 4: Techniques of Circuit Analysis (Ch 4)
- Week 5: The Operational Amplifier (Ch 5)
- Week 6: Inductance and Capacitance (Ch 6)
- Week 7: Response of First-Order RL and RC Circuits (Ch 7)
- Week 8: Midterm Exam
- Week 9: Natural and Step Responses of RLC Circuits (Ch 8)
- Week 10: Natural and Step Responses of RLC Circuits (Ch 8)
- Week 11: Sinusoidal Steady-State Analysis (Ch 9)
- Week 12: Sinusoidal Steady-State Analysis (Ch 9)
- Week 13: Introduction to Frequency Selective Circuits (Ch 14)
- Week 14: Introduction to Frequency Selective Circuits (Ch 14)
- Week 15: The Laplace Transform (Ch 12, 13)
- Week 16: Final Exam