

11310EE 221001 電路學 Electric Circuits

Class time: M3M4W1W2 Location: Delta 217

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Feel free to arrange office hour via e-mail.

Head-TA:

- Course Description

This is one of the mandatory courses for the EE Department. This course introduces the basic theory of linear circuit analysis, which helps students for solving realistic problems involving these circuits and further being able to design complex electronic, communication, computer, power, and control systems.

- Key Words

Electric circuit 電路, resistive circuit 電阻電路, circuit theorem 電路理論, first order circuit 一階電路, second order circuit 二階電路, ac power analysis 交流電路功率分析, OP amplifier 運算放大器

- Text Books

Svoboda and Dorf, Dorf's Introduction to Electric Circuits, Global Edition, Wiley.

- References

Electric Circuits, Eleventh edition, J. W. Nilsson and S. A. Riedel

- Teaching Method

Verbal instruction and lecture in English

- Syllabus

- Circuit variables and elements
- Resistive circuits
- Method of analysis of resistive circuits
- Circuit theorems
- Operational amplifiers
- Energy storage elements
- Complete response of RL and RC circuits
- Circuits with two energy storage elements (RLC circuits)
- Sinusoidal steady-state analysis

➤ AC steady-state power

● Evaluation

Quiz and participation (40 %)

midterm (30 %)

Final exam (30 %)

● Personal Website

<https://eeclass.nthu.edu.tw/>

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