

11220EE 221000 電路學 Electric Circuits

~~Class time: M3M4W1W2 Location: Delta 209~~

Instructor: Yi-Shan Lee (queenalee@ee.nthu.edu.tw) Delta 853 Tel: 62433

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, resistive circuit, circuit theorem, first order circuit, second order circuit, ac power analysis, OP amplifier

- 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 (25%)

1st midterm (25%)

2nd midterm (25%)

Final exam (25%)

● Personal Website

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

基於透明與負責任的原則，本課程鼓勵學生利用 AI 進行協作或互學，以提升本門課產出品質。根據本校公布之「大學教育場域 AI 協作、共學與素養培養指引」，本門課程採取有條件開放，說明如下

- 學生須於課堂作業或報告中的「標題頁註腳」或「引用文獻後」簡要說明如何使用生成式 AI 進行議題發想、文句潤飾或結構參考等使用方式。若經查核使用卻無在作業或報告中標明，教師、學校或相關單位有權重新針對作業或報告重新評分或不予計分。
- 本門課授課教材或學習資料若有引用自生成式 AI，教師也將在投影片或口頭標注。
- 修讀本課程之學生於選課時視為同意以上倫理聲明。