

National Tsing Hua University
Department of Power Mechanical Engineering

PME 3202 電子學 二 (Electronics II) Fall 2023

Instructor: 李昇憲 教授 (Professor: Sheng-Shian Li)

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Credit: 3 學分 **上課教室:** 工一 431 室

上課時間: Monday 10:00 - 12:00, Wednesday 9:00 - 10:00.

Office Hours of Instructor (教師諮詢時間): TBD

先修科目: 電子學 一 (Electronics I)

助教: 林仲偉(o3o.way@gmail.com)、羅邦喆(ggyy115478@gmail.com)、謝博丞(xiebocheng@gapp.nthu.edu.tw)、周俊宇(jimmy545860@gmail.com)、洪郁旂(hyc410855@gmail.com)、林侑廷(jkl1239720227@gmail.com) ;
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授課大綱:

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| 1. Introductions, reviews of electrical circuits and FETs | <u>Reading</u>
Lecture Notes & Chapter 5 |
| 2. Bipolar Junction Transistors (BJTs) | Chapter 4&6 |
| 3. Building Blocks of Integrated-Circuit Amplifiers | Chapter 7 |
| 4. Differential and Multistage Amplifiers | Chapter 8 |

Midterm Examination (11 月 20 日, 星期一 6:00 – 9:00 pm, Tentative)

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| 5. Frequency Responses of Amplifiers | Sec. 1.6, Chapter 9 |
| 6. *Operational-Amplifier and Data-Converter Circuits | Chapter 12 |

Final Examination (1 月 8 日, 星期一 6:00 – 9:00 pm, Tentative)

*若時間不夠，部份內容不教。

Textbook:

A. S. Sedra and K. C. Smith, *Microelectronic Circuits*, Oxford University Press, International 8th edition, 2020. ISBN 978-0-19-085350-1

References:

1. Neamen, D. A., *Microelectronics Circuit Analysis and Design*, McGraw Hill, 4th edition, 2010.
2. Razavi, B., *Fundamentals of Microelectronics*, Wiley, 2007.

Evaluations:

1. Quizzes: 15%
2. Term Project and Computer Homework: 25%
3. Midterm Exam: 25%
4. Experiment: 5%
5. Final Exam: 30%

Extra Point: 0-10% (Attendance, extra computer homework, experiment, etc.)