

**National Tsing Hua University**  
**Department of Power Mechanical Engineering**

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**PME 3202**

**電子學 二 (Electronics II)**

**Fall 2012**

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

**Tel:** 62401

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**Credit:** 3 學分

**上課教室:** 工一 215 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)

**助教及諮詢時間:** TBD

**授課大綱:**

1. Introductions, reviews of electrical circuits and FETs
2. Bipolar Junction Transistors (BJTs)
3. Building Blocks of Integrated-Circuit Amplifiers
4. Differential and Multistage Amplifiers

**Reading**

- Lecture Notes & Chapter 5  
Chapter 4 (Secs. 4.5 – 4.7)  
Chapter 6  
Chapter 7

**Midterm Examination (11 月 12 日, 星期一 6:00 – 9:00 pm)**

5. Frequency Responses of Amplifiers Sec. 1.6, Chapter 8
6. \*Operational-Amplifier and Data-Converter Circuits Chapter 10

**Final Examination (1 月 7 日, 星期一 6:00 – 9:00 pm)**

\*若時間不夠，部份內容不教。

**Textbook:**

A. S. Sedra and K. C. Smith, *Microelectronic Circuits*, Oxford University Press, 6th edition, 2011.

**References:**

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

**Evaluations:**

1. Quizzes: 20%
2. Term Project and Computer Homework: 25%
3. Midterm Exam: 25%
4. Final Exam: 30%

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