

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

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**PME 3202      電子學 二 (Electronics II)      Fall 2017**

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

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**Credit:** 3 學分      **上課教室:** 工一 104 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:** Anurag Zope (zopeanurag@gmail.com)、劉峻佑([f810913@hotmail.com](mailto:f810913@hotmail.com))、

邱仕偉([rb33012@gmail.com](mailto:rb33012@gmail.com))；

台達館 326 室；分機 80631

**授課大綱:**

- |   | <u><b>Reading</b></u>     |
|---|---------------------------|
| 1. Introductions, reviews of electrical circuits and FETs             | 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                 |
| <b>Midterm Examination (11 月 13 日, 星期一 6:00 – 9:00 pm, Tentative)</b> |                           |
| 5. Frequency Responses of Amplifiers                                  | Sec. 1.6, Chapter 9       |
| 6. *Operational-Amplifier and Data-Converter Circuits                 | Chapter 12                |
| <b>Final Examination (1 月 8 日, 星期一 6:00 – 9:00 pm, Tentative)</b>     |                           |
| *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 7th edition, 2015. ISBN 978-0-19-933914-3

**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.)