## Ve320 final exam covers the following contents:

- \* 6.2 Non-ideal Effects
- 7.1-7.2 Reverse-bias Junction Capacitance (follow my slides)
- \* 7.2 Diffusion Capacitance (follow my slides)
- \* 9.1-9.2.1 Photodiodes
- \* 9.3.1 Solar Cell Basics
- \* 9.4.1 LED Overview
- 10 BJT Fundamentals
- 11.1 Ideal BJT
- \* 11.2 (except 11.2.7) Non-ideal BJT
- 14.1-14.2.2 MS Diode Fundamentals and I-V Characteristics
- \* 14.3 Rectifying and Ohmic Contacts
- 16 (except 16.4.2) MOS Fundamentals
- 17.1-17.2.2 MOSFET
- \* 17.2.3-17.2.4 Bulk Charge Theory and Exact Charge Theories
- \* 18 Non-ideal MOS

## Note:

- 1. All the contents with a star (\*) only requires qualitative understanding, although some **very simple** calculations may appear in the final exam.
- 2. The course contents before mid-term are the fundamentals of this course, so there is no guarantee that they will not appear in the final. But the final exam will be focusing on the course contents listed above.