ECE 323 **Electronics II** **Winter 2026**

https://web.engr.oregonstate.edu/~moon/ece323

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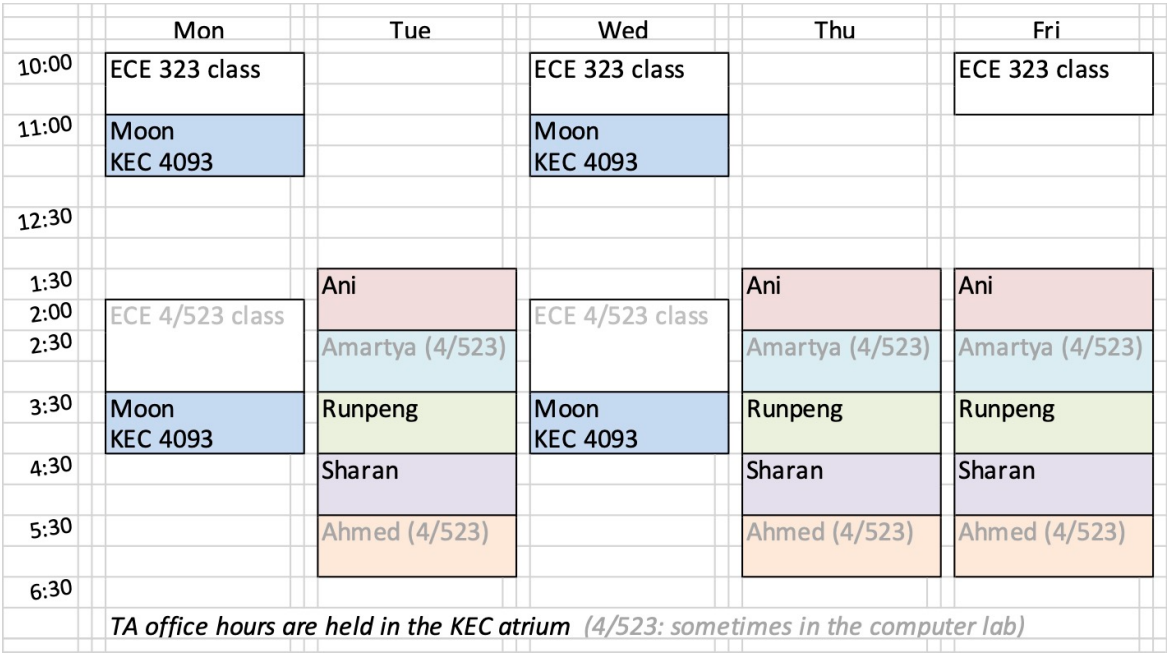

Text Microelectronic Circuits by Sedra & Smith (& Carusone & Gaudet)

HW Homework will not be graded based on right or wrong answers, but on the level of effort shown in what you submit each week. Each assignment is to be submitted via Canvas (scanned PDF only) by/before the due date at 10am. No late homework will be accepted. Homework grading will be done using one of three scores: **10**, **5**, or **0**. A complete/good effort and understanding demonstrated will receive a **10**; obviously insufficient work (or copying of solutions) will receive a **0**; and a **5** for something in between.

Exams The in-person exams will be **closed** book/notes. I provide a reference sheet along with the exam. This reference sheet is already made available on the class web page, so you should get used to the content well ahead of time.

OH During office hours **please ask specific questions, referring to a copy of my own writing, e.g. posted lecture notes, homework solutions.**

Grade

Homework (six of them)	15%	
Midterm-1	25%	(**Friday Jan-30** 10:05-10:45am)
Midterm-2	25%	(**Monday Feb-23** 10:05-10:45am)
Final	35%	(**Tuesday Mar-17** 6:05-7:45pm)

Canvas I minimally use Canvas, to let you upload HW and to keep you informed of your scores. Please don't expect me to receive/see Canvas messages. Send me an email instead.

Academic Dishonesty (cheating) is claiming credit for the work of another person or using unauthorized materials in any academic work (e.g. exams), either through the student's own conduct or the assistance of another. See Code of Student Conduct document at https://scs.oregonstate.edu. **Exams**: Communicating with others or copying from others/friends... **Homework**: Copying solutions or another student's work... What will be the penalty? Receive 0% and potentially for the entire course. You will also be reported to the university.

ECE 323 **Electronics II**

Your reading guide for the course...
Section numbers are from the eighth edition, but you can find the same topic in other editions.

Course overview; ECE 322 review
- 5.1 Device structure and physical operation (MOSFET)
- 5.2 Current-voltage characteristics (MOSFET)
- 5.3 MOSFET circuits at DC
- 6.1 Device structure and physical operation (BJT)
- 6.2 Current-voltage characteristics (BJT)
- 6.3 BJT circuits at DC
- 7.1 Basic principles (transistor amplifiers)
- 7.2 Small-signal operation and models (transistor amplifiers)

Single stage amplifiers
- 7.3 Basic configuration (transistor amplifiers)
- 7.4 Biasing (transistor amplifiers)
- 7.5 Discrete-circuit amplifiers (transistor amplifiers)

Multi stages & building blocks
- 8.2 IC biasing: current sources and current mirrors
- 8.3 The basic gain cell
- 8.4 The common-gate and common-base amplifiers as current buffers
- Parts of 9.* (differential and multistage amplifiers)

Frequency response
- 10.1 High-frequency transistor models
- 10.2 High-frequency response of CS and CE amplifiers
- 10.3 The method of open-circuit time constants
- 10.8 Low-frequency response of discrete-circuits CS and CE amplifiers

Feedback
- 11.*

Oscillators/feedback & stability
- 15.1 Basic principles of sinusoidal oscillators
- 15.2 Opamp-RC oscillator circuits
- 15.4 Nonlinear oscillators or function generators