

# EECS 100/42-43 Course Overview

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- EECS 100/42-43 (called EE100 from now on):
  - Course that teaches the fundamentals of electronics from the perspective of non-electrical engineers.
  - Prerequisites: Math 1B, Physics 7B (official), none (unofficial)
  - Course involves six hours of lecture, two hours of discussion and six hours of lab work each week.
- Course content:
  - Fundamental circuit concepts and analysis techniques (concepts)
  - First order circuits (concepts)
  - Op Amps (concepts and applications: amplifiers and oscillators)
  - Frequency response (concepts and applications: filters)
  - Diodes and Transistor Circuits (concepts and applications: cool circuits)
  - Project (use all concepts and applications you learned in the course)
- Text Book
  - Book: James W. Nilsson and Susan A. Riedel, "Electric Circuits", 8th Ed. (buy the edition without the PSPICE supplement). **DO NOT USE ANY OTHER EDITION.**
  - Online prelabs, lab guides and lab reports
  - Online supplementary notes and reader.

## Instructor

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- Bharathwaj “Bart” Muthuswamy
  - Office: 151M/264M Cory Hall
  - Office hours: Monday, Wednesday 4 – 5 pm in 277 Cory.
  - EE Ph.D. student (BS in EE @ UCB, May 2002; MS in EE @ UCB, May 2005; PhD in EE @ UCB (expected May 2009))
  - <http://nonlinear.eecs.berkeley.edu/bharath>
  - [mbharat@cory.eecs.berkeley.edu](mailto:mbharat@cory.eecs.berkeley.edu)

# Important DATES

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- Lab Sessions will start in week 2. EXCEPT for the first discussion section, you have discussion this week.
  - Stay with ONE Discussion and Lab session you registered.
- 1 Midterm and 1 Final:
  - Midterm Review Session: Friday, 07/11 2:00 – 4:00 in 277 Cory.
  - Midterm: Monday, 07/14, 2:00 – 4:00 in 277 Cory and 10 Evans.
  - Final Review Session: Wednesday, 08/13, 2:00 – 4:00 in 277 Cory.
  - Final: Friday, 08/15, 2:00 – 4:00 pm in 277 Cory and 10 Evans.

# Syllabus and Lab Schedule

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Week	Date(s)	Lecture	Lab(s)
1	06/23 – 06/27	Book chapters 1 and 2 (Intro to EE, simple circuits)	NO LAB
2	06/30-07/03	Book chapters 3 and 4 (Circuit Analysis)	1: Sources & Resistive Circuits 2: Equivalent Circuits
3	07/07-07/11	Book chapters 6 and 7 (RC circuits, skipping op-amps for now to keep in sync with labs)	3: Capacitors and Inductors [ONLY ONE LAB BECAUSE OF JULY 4 <sup>th</sup> MAKEUP LAB]
4	07/14-07/18	Book chapter 5, oscillators (Op-Amps, Online reader)	<b>MIDTERM</b> 4: Opamps – Linear
5	07/21-07/25	Book chapter 9 (Frequency Domain)	5: Opamps - Nonlinear 6: Frequency Domain
6	07/28-08/01	Online Reader (Diodes and Transistors)	7,8: Strain Gauge and Project Lab 1
7	08/04-08/08	Online Reader (Diodes and Transistors)	9,10: Project Labs 2 and 3
8	08/11-08/15	Course wrap up.	NONE <b>FINAL</b>

# Grading Policy

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- EECS 100 Weights:
  - 5%: 6 HW sets
  - 20%: 7 Labs
  - 10%: Project
  - 30%: Midterm
  - 35%: Final exam
- EECS 42 Weights:
  - 15%: 6 HW sets
  - 40%: Midterm
  - 45%: Final
- **NO** late HW or Lab reports accepted.
- **NO** make-up exams.

# Grading Policy (Cont'd)

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- Weekly HW:
  - Assignment are already up on the website.
  - Due 2 pm PST on Thursdays (starting the **2<sup>nd</sup> WEEK**) in HW box, 240 Cory.
  - On the top page, right top corner, write your name (in the form: Last Name, First Name) with lab session number.
  - Graded homework will be returned one week later in lecture.
- Labs
  - You must complete the prelab section before going to the lab. The prelabs are checked by the GSIs at the beginning of each session. If prelabs are completed during the lab sessions, it is considered late and 50% will be deducted.
  - Lab reports are due exactly one week after your lab is completed.
- It is your responsibility to check with the head GSI from time to time to make sure all lab grades are entered correctly.
- **PLEASE MAKE SURE YOUR WORK IS READABLE! IF IT IS NOT, WE WILL NOT GRADE YOUR WORK! Examples...**

# Classroom Rules

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- Please come to class on time.
- Turn off cell phones, pagers, radio, CD, DVD, etc.
- No food.
- No pets.
- Do not come in and out of classroom.
- Lectures will be recorded. 24-hour turnaround time for online posting.  
**DISCLAIMER:** Use the recorded lecture videos for emergency only!