

Colorado School of Mines
Department of Electrical Engineering and Computer Science
EENG 385
Electronic Devices and Circuits
Spring 2017

This course will develop your understanding of the detailed operation of electronic devices including op-amps, diodes, transistors, and related circuits. This course consists of an integrated lecture and laboratory.

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Office Hours: Mondays 12-1pm, Tuesdays 1-3pm, Wednesdays 12-1pm, Friday 12-1pm or by appt

Class Times:

EGGN 385	11:00am - 11:50am	MWF	Marquez Hall 322
Laboratory A	8:00am - 10:50am	R	Brown Building 304
Laboratory B	11:00am - 1:50pm	R	Brown Building 304
Laboratory C	2:00pm - 4:50pm	R	Brown Building 304

Text: Sedra and Smith, *MICROELECTRONIC CIRCUITS*, 7th Edition, Oxford University Press, 2014.

Assignments: Homework shall be assigned weekly and is to be turned in at the end of class as announced. Homework assignments, solutions and exam solutions will be posted on Canvas. Laboratory work is to be documented in a manner consistent with good engineering practice. You will need to complete the reading assignments and examples before class to best participate and understand the material presented. *All material submitted for grading should be presented in neat and professional form.*

Grading: The weighting of each component of your work is shown as follows:

- Laboratory 25%
- Homework 10%
- Two midterm exams 20% each
- Final Exam 25%

ABSOLUTELY NO LATE HOMEWORK & MAKE-UP EXAMS

The decision of your grade will be based upon the following criteria as demonstrated by your performance on the exams, homework, classroom participation and lab:

- A Complete mastery of all presented material and reading
- B Good mastery of the presented material and reading
- C Fair understanding and mastery of the presented material
- D Marginal understanding of material

Course Outline

Week # and Days	Topic	Chapter
1 (1/10) T-W-F	Introduction, Review electrical circuits	1
2 (1/16) M	MLK B-Day – No Class	
2 (1/18) W-F	Review electrical circuits, electronic circuits	1
3 (1/23) M-W-F	Operational Amplifiers	2
4 (1/30) M-W-F	Op Amp Circuits	2
5 (2/6) M-W-F	Semiconductors	3
6 (2/13) M-W-F	Semiconductor diode principles	4
7 (2/20) M	Presidents' Day – No Class	
7 (2/20) W-F	Applications of diodes	4
8 (2/27) M-W-F	Review Exam 1 Mid-Term Exam 1 (Thursday 3/2) Bipolar Junction Transistor (BJT)	6
9 (3/6) M-W-F	Bipolar Junction Transistor (BJT)	6
10 (3/13) M-W-F	Bipolar Junction Transistor (BJT)	6
11 (3/20) M-W-F	MOSFETs	5
12 (3/27) M-W-F	Spring Break – No Class	
13 (4/3) M-W-F	MOSFETs/Transistor Amplifiers	5/7
14 (4/10) M-W-F	Transistor Amplifiers / Review Exam 2 Mid-Term Exam 2(Thursday 4/13)	7
15 (4/17) M-W	Differential Amplifiers	9
15 (4/21) F	E-Days – No Class	
16 (4/24) M-W-F	Differential Amplifiers	9
17 (5/1) M	Differential Amplifiers	9
17 (5/3) W	Review	
17 (5/5) F	Dead Day – No Class	
5/6-5/11	Final Exam Week	

HONOR CODE

As a Mines student, I am expected to adhere to the highest standards of academic excellence and personal integrity regarding my schoolwork, exams, academic projects, and research endeavors. I will act honestly, responsibly, and above all with honor and integrity in all aspects of my academic endeavors at Mines. I will not misrepresent the work of others as my own, nor will I give or receive unauthorized assistance in the performance of academic coursework. I will conduct myself in an ethical manner in my use of the library, computing center, and all other school facilities and resources. By practicing these principles, I will strive to uphold the principles of integrity and academic excellence at Mines. I will not participate in or tolerate any form of discrimination or mistreatment of another individual.

ADDITIONAL INFO

The Colorado School of Mines is committed to ensuring the full participation of all students in its programs, including students with disabilities. If you are registered with Disability Support Services (DSS) and I have received your letter of accommodations, please contact me at your earliest convenience so we can discuss your needs in this course. For questions or other inquiries regarding disabilities, I encourage you to visit disabilities.mines.edu for more information.