Electronics – EE2032 Spring 2021

Course Description
This course introduces basic concepts of semiconductors and teaches common diode and transistor circuits. The course aims to develop a basic understanding of the theory and practice of electronic devices. Students who complete the course will gain the skills necessary to analyze and design simple electronic circuits.

Date and Time
Lectures are going to be held online on **Wednesdays from 14:00 to 15:50**.

https://zoom.us/j/99160235494?pwd=UTBiTmxaaGJYTy93TGE5eUk5YWZ6QT09

Meeting ID: 991 6023 5494, Passcode: 345414

Instructor & Assistant
The course will be given by Dr. Ahmet Unutulmaz.

E-mail: ahmet.unutulmaz@marmara.edu.tr, Room: MC361

Teaching assistant (TA) for the course is Salih Çolakoğlu

E-mail: salihcolakoglu90@gmail.com

Office Hours
Students are welcomed to discuss the course materials online on Wednesdays from 16:00 to 17:00.

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Textbook
Adel S. Sedra and Kenneth C. Smith, **Microelectronic Circuits** 7th Edition, *Oxford University Press*, 2014.

Attendance
Attendance is mandatory. There are going to be ten pop-quizzes at unscheduled and random times. Each pop-quiz will contribute 3 points to your overall grade. Sadly, **any late submission will not be graded**.

Homework
During the semester 10 homework are going to be assigned, however these are not going to be graded. Some of the questions in each pop-quiz will be similar to the ones in the homework problems.

Lab Sessions
There are going to be four live labs. The TA is going to construct the necessary circuits and make the measurements online. Students may ask questions during the experiments. At the end of each lab, students will be asked to answer some questions about the experiment, answers to these questions are going to constitute the lab grades. Each lab will contribute 5 points to your overall grade. Labs will be held online on Thursdays from 17:00 to 18:50.

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Grading Policy

Pop-quizzes 30%, Laboratory Grade 20%, Midterm Exam 20%, Final Exam 30%

There will be 10 pop-quizzes and pop-quiz grade will count for 30% of the semester grade. Unfortunately, there will not be any make-up for the pop-quizzes.

There will be 4 live labs, at the end of each lab students should answer some questions about the experiments. These answers will count for 20% of the semester grade.

Midterm and Final Exams will be held online, and the grades will count for 20% and 30% of the semester grade, respectively. Students are supposed to keep their camera on during the exams. A student who doesn't turn on his/her camera during the exam will be asked to take an oral exam, where the grading will be based on the oral exam. In addition, a few students will be randomly chosen and will be asked to take an oral exam.

Midterm exam will be given in week 8 between April 19th and April 25th. And the final will be given between June 14th and June 25th. Exact dates and times will be announced later.

Make-up Policy

Student, whose excuse is approved by the University, will be given a make-up exam. **Note that, there will not be any make-up for a missed quiz.**

Lab Schedule

Lab	Date*	Subject
1	April 1st	Circuit Analysis
2	April 15th	Characteristics of Diodes
3	May 6th	Diode Circuits
4	May 20th	Biasing BJTs

Course Schedule

Lecture	Date*	Subject
1	March 3rd	Introduction, Basic Circuit Concepts
2	March 10th	Nodal & Mesh Analysis
3	March 17th	Superposition, Thevenin and Norton Theorems
4	March 24th	Semiconductors
5	March 31st	Characteristics of Diodes
6	April 7th	Diode Applications
7	April 14th	Diode Applications
8	**April 21st**	**No Lecture, Midterm Week**
9	April 28th	Bipolar Junction Transistors (BJT)
10	May 5th	Biasing BJT Circuits
11	**May 12nd**	**No Lecture, Festival**
12	**May 19th**	**No Lecture, Anniversary**
13	May 26th	MOS Field Effect Transistors (MOSFET)
14	June 2nd	Biasing MOSFET Circuits
15	June 9th	Small Signal Analysis

*Classes and labs will be held online.