EE-359-A: Electronic Circuits
School of Engineering and Science
2021 Fall

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| Meeting Time: | Tuesday 10:00 AM to 11:50 AM, Thursday 11:00 AM to 11:50 AM |
| Classroom Location: | Peirce 218 |
| Instructor: | Yanghyo Kim |
| Contact Information: | Burchard 216, ykim19@stevens.edu |
| Office Hours: | Thursday 10:00 AM to 11:00 AM, 1:00 PM to 3:00 PM |
| Text Book: | Fundamentals of Microelectronics, 3rd ed, Wiley, by Behzad Razavi |
| Prerequisite: | EE-245 |
| Corequisite: | None |
| Cross-listed with: | None |

## COURSE DESCRIPTION

Analysis and design of microelectronic circuits with emphasis in understanding the structure and circuit models of diodes, and Metal Oxide Semiconductor Field Effect Transistors (MOSFET) including biasing, small-signal and large signal models, and use of these devices in designing electronics circuitry.

## LEARNING OBJECTIVES

Upon completing this course, students should be able to:

1. Solve input and output characteristic of diode circuits.
2. Construct small-signal model of diode circuits.
3. Solve operating condition of MOSFET.
4. Solve small-signal gain, input/output impedance of amplifiers.
5. Solve frequency response of amplifiers when capacitive effects are included.
6. Solve input/output characteristic and small signal gain of differential amplifiers.

## FORMAT AND STRUCTURE

This course is comprised of lessons.

## COURSE MATERIALS

We will use Canvas.

## TENTATIVE COURSE SCHEDULE

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| Weeks 1-3: | Chapter 1-3 |
| Weeks 4-5: | Chapter 6 |
| Weeks 6-9: | Chapter 7, 9 |
| Weeks 10-11: | Chapter 11 |
| Weeks 12: | Chapter 10 |

## GRADING PROOCEDURES

Grades will be based on:

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| Examples and Homework: | 30% |
| Midterm: | 30% |
| Final: | 40% |
| Total: | 100% |

## ACADEMIC INTEGRITY

**Student Code of Academic Integrity:** *All Stevens students promise to be fully truthful and avoid dishonesty, fraud, misrepresentation, and deceit of any type in relation to their academic work. A student's submission of work for academic credit indicates that the work is the student's own. All outside assistance must be acknowledged. Any student who violates this code or who knowingly assists another student in violating this code shall be subject to discipline.*

## LEARNING ACCOMODATIONS

Stevens Institute of Technology is dedicated to providing appropriate accommodations to students with documented disabilities. The Office of Disability Services (ODS) works with undergraduate and graduate students with learning disabilities, attention deficit-hyperactivity disorders, physical disabilities, sensory impairments, psychiatric disorders, and other such disabilities in order to help students achieve their academic and personal potential. They facilitate equal access to the educational programs and opportunities offered at Stevens and coordinate reasonable accommodations for eligible students. These services are designed to encourage independence and self-advocacy with support from the ODS staff. The ODS staff will facilitate the provision of accommodations on a case-by-case basis.

### *Disability Services Confidentiality Policy*

Student Disability Files are kept separate from academic files and are stored in a secure location within the Office of Disability Services. The Family Educational Rights Privacy Act (FERPA, 20 U.S.C. 1232g; 34CFR, Part 99) regulates disclosure of disability documentation and records maintained by Stevens Disability Services. According to this act, prior written consent by the student is required before our Disability Services office may release disability documentation or records to anyone. An exception is made in unusual circumstances, such as the case of health and safety emergencies