

Alanya Alaaddin Keykubat University | Rafet Kayış Faculty of Engineering
Electrical-Electronics Engineering Department
2023-2024 Spring Semester

Syllabus

Code/Name	EEE 307 / Analog Electronics Laboratory
Type	Required
Credit/ECTS	3/3
Hour per Week	4
Level/Year	Undergraduate/3
Semester	Spring
Classroom	A103
Content	P-n junction diode, BJT and FET I-V characteristics, clipper, clamper and rectifier circuits, DC biasing of BJTs and FETs. BJT and FET amplifiers
Prerequisites	None
Textbooks	<i>Primary</i> A. S. Sedra & A. Grabel, Microelectronic Circuits & Devices, Oxford University Press, 7th Edition, 2014. <i>Supplementary</i> B. G. Streetman and S. Banerjee, Solid State Electronic Devices, Prentice Hall Series.
Objectives	<ul style="list-style-type: none">• To be able to set up a given circuit correctly• To make the measurements and to analyze the data obtained from the experiment• To be able to simulate the analyzed circuits
Course Outcomes	In this course you will be able to: CO1 Set up clipper and clamper circuits and obtain input-output transfer characteristics CO2 Obtain I-V characteristics of BJTs CO3 Obtain I-V characteristics of FETs CO4 Set up clipper and regulator circuits with zener diode and make measurements.

Weekly Schedule of Topics

W	Topic
1	Introducing laboratory devices
2	Practices to learn the use of lab devices
3	Obtaining I-V curves of p-n junction diodes.
4	Clipper and clamper circuits
5	Rectifier circuits
6	Zener diode circuits
7	BJT I-V characteristics.
8	BJT stability analysis.
9	BJT amplifier circuit
10	FET I-V characteristics
11	FET amplifier circuit
12	Simulation studies
13	Simulation studies.

Contribution to Program Outcomes*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	5	5	1	5	0	5	1	3	1	3	0
CO2	5	5	1	4	0	5	4	3	4	3	0
CO3	5	5	3	5	2	5	1	3	1	3	0
CO4	5	4	3	5	0	5	2	3	1	4	0

* Contribution Level | 0: None | 1: Very Low | 2: Low | 3: Medium | 4: High | 5: Very High

Requirements	Basic knowledge of Electromagnetic Field Theory	
Course Policy	<ul style="list-style-type: none">• Be in the class on time.• English should always be used to communicate with one another.• At least 70% attendance is required, otherwise a grade of DZ will be assigned.	
Cheating & Plagiarism	<ul style="list-style-type: none">• Copying or letting someone copy your work on exams, assignments, or reports is cheating.• Cutting and pasting text, figures and tables from web sources or any other electronic source is plagiarism.• The consequence of academic dishonesty is to receive a grade of FF for the course.	
Evaluation	Midterm	40%
	<u>Final Exam</u>	60%
	Total	100%

Instructor

Name/Surname	Fikri Serdar Gökhan	Email	serdar.gokhan@alanya.edu.tr
Room	209	Office Hours	W 11.30-12.30 F 13.30-14.30

Prepared by Akin Uslu on June 10th, 2024.