

Course name: EE 336 – Analog Electronics Laboratory				Department: Electrical and Electronics Engineering				
Semester	Methods of Education							Credit (ECTS)
	Lecture	Recitation/	Lab	Project/Field Study	Homework	Other	Total	
6	14		28				42	1
Language	English							
Compulsory/Elective	Compulsory							
Prerequisites	EE326 - Analog Electronics							
Course Contents	Transistor Amplifiers and Installation Types, Investigation of Common Emitter Amplifier, Investigation of Common Base Amplifier, Investigation of Common Collector Amplifier, E-V Mosfet Characteristic Analysis, Principles of E-V Mosfet, Sound Amplifiers, Sound Amplifier using Transistor, RC Phase Shifted Oscillator Investigation, LC Oscillator Investigation							
Course Objectives	To know the operation and the structure of Cascode stages as a Current Source and an Amplifier. To design Sound Amplifiers. To design and analysis of Bipolar and MOS differential pairs and their small and large signal analysis. To analysis of RC Phase and LC oscillator circuits.							
Learning Outcomes and Competences	Learn designing cascode amplifiers with using bipolar junction transistors, and field effect transistors. Learn how to analyze oscillator circuits							
Textbook and /or References	Textbooks: Razavi, Fundamentals of Microelectronics, 2nd. Ed., Wiley, 2012. Reference Textbooks: Sedra and Kenneth C. Smith; Microelectronic circuits; 3rd Ed; Saunders College Pub.; 1991. Jacob Milkman and Arvin Grabel; Microelectronics; 2nd Ed; McGraw - Hill Pub.; 1988.							
Assessment Criteria					If any, mark as (X)	Percentage (%)		
	Midterm Exams				X	30		
	Quizzes							
	Homework							
	Projects							
	Term Paper							
	Laboratory work				X	30		
	Attendance							
Final Exam				X	40			
Instructor								
Week	Subject							
1	Transistor Amplifiers and Installation Types							
2	Investigation of Common Emitter Amplifier							
3	Investigation of Common Base Amplifier							
4	Investigation of Common Collector Amplifier							
5	E-V Mosfet Characteristic Analysis							
6	E-V Mosfet Output Characteristic							
7	Principles of E-V Mosfet							
8	Principles of E-V Mosfet							
9	Midterm							
10	Sound Amplifiers							
11	Sound Amplifier using Transistor							
12	RC Phase Shifted Oscillator Investigation							
13	LC Oscillator Investigation							
14	Hartley Oscillator Investigation							
15	Hartley Oscillator Investigation							